

**A Spatial and Social Study of the Relationship between Public Place and  
Retail Activity: The Temples of Chennai, South India**

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**Doctor of Philosophy  
In  
Architecture**

By

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### Abstract

Chennai, South India, is a city whose historicity and modernity are evident, both culturally and physically. It is a typical example of an Indian city which has many of its temples in its urban landscape, each having varied commercial activity around them, often in the form of retail activity. The researcher's initial curiosity about why, where and how the retail activity related to Chennai temple-locations developed into an inquiry about the contextual meaning of this relationship. The approach taken was to study the spatial and social contexts of Chennai that shape this particular urban phenomenon. The literature review examined both contemporary and historic Middle-Eastern mosques and European churches to establish their relationship with retail activity, while at the same time, considering the historic and current relationship of South Indian temples to similar activity. The empirical, case-study research explored the contemporary spatial and social contexts of 36 temples in Chennai city and established how these contexts exemplify the relationship between the temples and retail activity. The spatial study used Space Syntax analysis (Hiller *et.al.*), land-use and figure-ground studies, from which the researcher derived five typologies to look at spatial heterogeneity, namely, a set of principles that would show the spatial relationships. The social study used a questionnaire survey and found significant socio-economic and socio-cultural patterns that impinge on these two activities. The research conclusion chapter: a) examines contemporary and historical contexts to establish the development of the relationship between the temple location and retail activity; b) draws comparisons with international contexts in order to gain a wider perspective of the religious/commercial relationships that have existed or currently exist in other places and to establish any associated retail activity patterns that have existed or exist at these sites, and the significance of these findings in relation to the Chennai case studies; c) correlates the findings from the empirical investigation, namely, the social and spatial studies in order to establish the social meanings behind the spatial landscape and d) presents recommendations that would help the future of Chennai city.



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Dedicated to  
my guru, Leslie Forsyth  
And  
my Family



## **Gratitude to...**

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<b>Chapter 5 Spatial Study</b>	<b>106</b>
5.1 Case study temples	106
5.2 The city-level study	107
5.3 The district-level study	122
5.4 Findings from the city and local studies	129
Conclusion	143
<b>Chapter 6 Social study</b>	<b>145</b>
6.1 The temple as a social space	145
6.2 Descriptive analysis	148
6.3 Associative analysis	160
6.4 Summary of the findings	166
Conclusion	168
<b>Chapter 7 Research conclusion</b>	<b>170</b>
7.1 Findings so far	170
7.2 Developmental process through the history of temple-retail paradigm	173
7.3 International comparison	175
7.4 Correlation of spatial and social findings	177
7.5 Recommendations	186
<b>Bibliography</b>	<b>190</b>
<b>Appendices</b>	<b>198</b>
Appendix 1.1 Urbanisation in pre-British India	198
Appendix 2.1 List of 36 case-study temples	202
Appendix 2.2 Spatial and social contexts of the case-study temples	204
Appendix 2.3 Spatial study sheets	240
Appendix 2.4 Statistical data of the local context evaluation	258
Appendix 3.1 Questionnaire data – Descriptive analysis	260
Appendix 3.2 Questionnaire data – Associative analysis	274
Appendix 3.3 Questionnaire data – Results of the associative analysis	281
Appendix 3.4 The questionnaire	288



## List of Figures\*

<b>Chapter 1 Introduction</b>	
Figure 1.1 Multi representations of the Hindu gods	3
Figure 1.2 Conceptual layout of the temple, tank and streets	5
Figure 1.3 Hindu temple - the Kandariya temple in Khajuraho (Source: liberalarts.iupui.edu/~wijackso/tempfrac/)	5
Figure 1.4 Temple Tank (Source: <a href="http://www.flickr.com/photos/plsssnraju/433482824/">http://www.flickr.com/photos/plsssnraju/433482824/</a> )	6
Figure 1.5 Temple-car festivals (Source: <a href="http://aarbalaji.blogspot.com/2007/04/kapaleeswarar-temple-festival.html">http://aarbalaji.blogspot.com/2007/04/kapaleeswarar-temple-festival.html</a> )	7
Figure 1.6 Chennai – city and metropolitan boundaries (Source: the CMDA)	8
Figure 1.7 Madurai city and Sri Minakshmi Amman Temple (Source: map published by TTDC)	15
Figure 1.8 Trichy city (left), the connecting bridge between the midland city, Trichy and an island town, Srirangam (right, above) and the Srirangam temple complex (right, below) (Source: Tamil Nadu Tourism Development Corporation (TTDC) and <a href="http://www.sacredsites.com">http://www.sacredsites.com</a> )	16
Figure 1.9 Thiruvannamalai temple complex (Source: <a href="http://www.sacredsites.com">http://www.sacredsites.com</a> )	17
Figure 1.10 Mylapore in the pre-British period	18
Figure 1.11 Mylapore West-car street (Left: British period 1901; Right: Contemporary period 2001) (Source: The Mylapore Times, the Metro magazine)	19
Figure 1.12 North car-street (Left: British period 1936; Right: Contemporary period 2004)	19

<b>Chapter 2 Research methodology</b>	
Figure 2.1 Italian Ideal city and Indian Vedic city (Source: Worpole, 2000: 18 and Kostof, 1990: 32)	26
Figure 2.2 Three components of the urban landscape	28
Figure 2.3 Research focus	30
Figure 2.4 Research structure	34

<b>Chapter 3 International religious public places</b>	
Figure 3.1 Umayyad mosque of Damascus (Source: Robinson, 1909 'Damascus - the Pearl of the desert')	47
Figure: 3.2 Isfahan (Left): the old Friday mosque (Right): the urban configuration (Source: Hemidi, 2003)	48

\* Unless mentioned otherwise, the author has sourced all the figures.



<b>Chapter 3 – contd.</b>	
Figure 3.3 Armagh (10 <sup>th</sup> century), an Irish town	50
Figure:3.4 York Town (Source, Esher, 1968)	51
Figure 3.5 13 <sup>th</sup> century Thame, an English town (Source: Slatter, 1990)	51
Figure 3.6 Mosques of Isfahan	60
Figure 3.7 York Minster (Source: <a href="http://viewfinder.english-heritage.org.uk">http://viewfinder.english-heritage.org.uk</a> )	60
Figure 3.8 English (York) and Iranian (Kerman) cities (above and below, respectively): location of the urban elements marked on Space Syntax graphical representation (Source: Batty, 1999)	63
Figure 3.9 ‘Live centre’ of York (Source: Hillier, 1999)	64

<b>Chapter 4 Historical perspective</b>	
Figure 4.1 Urban configurations of Madurai (left) and Chidambaram (right) (Source: Nanda, 1996)	77
Figure 4.2 Kancipuram and its suburbs during AD1300 (Source: Champakalakshmi, 1996)	79
Figure 4.3 Conceptual figure of the process	80
Figure 4.4: The spatial connection between Royal centre, temple settlement and trading centre (case 1)	82
Figure 4.5: The spatial connection between temple settlement and trading centre (case 2)	82
Figure 4.6 Typical spatial planning of the temple locations	84
Figure 4.7 Madras Region 1300 AD (Source: Champakalakshmi, 1996)	87
Figure 4.8 Madras 1798 by the Court of the Recorder (Source: Basu, 1993)	91
Figure 4.9: Madras city, 1901 (Source: Lewandowski, 1977)	94
Figure 4.10 Map of Madras published in 1859	97
Figure 4.11 Mylapore Division in 1855 (Source: the British Library, London)	98

<b>Chapter 5 Spatial Study</b>	
Figure: 5.1 Location of the case study temples	106
Figure 5.2 Chennai City – The Global Integration Map and the Case Study Temples Locations	111
Figure 5.3 Chennai city – Relationship of all land uses	115
Figure 5.4 Chennai city – Relationship of commercial land use and historic temple locations	116



<b>Chapter 5 – contd.</b>	
Figure 5.5 Chennai city – Relationship of commercial and residential land uses	117
Figure 5.6 Chennai city – Relationship of commercial, institutional and industrial land uses	118
Figure 5.7 Space Syntax and the village temples	121
Figure 5.8 Chennai City – The local integration map	125
Figure 5.9 Function of the temple street	127
Figure 5.10 Position of the temple on the street	128
Figure 5.11 Temple streets and the tank	129
Figure 5.12 Location 4: T.Nagar	131
Figure 5.14 Location 6: Vadapalani	132
Figure 5.15 Location 7: Mylapore	133
Figure 5.14 Typology 1	138
Figure 5.15 Typology 2	139
Figure 5.16 Typology 3	140
Figure 5.17 Typology 4	141
Figure 5.18 Typology 5	142

<b>Chapter 6 Social study</b>	
Figure 6.1 Occupation of the respondents	149
Figure 6.2 Main purpose of the visit	150
Figure 6.3 Travel mode of the respondents	150
Figure 6.4 Frequency of visiting the temple	151
Figure 6.5 Reasons for choice of the temple	151
Figure 6.6 Frequency of shopping	152
Figure 6.7 Reasons for shopping	152
Figure 6.7a Economic aspects	153
Figure 6.7b Religious aspects	153
Figure 6.7c Locational aspects	153
Figure 6.8 Activities inside the temple	154
Figure 6.9 Other activities mentioned by the respondents	154
Figure 6.10 “I visit mostly visit the temples which are...”	155
Figure 6.11 “I visit the temples in...”	155
Figure 6.12 Reasons for shopping	156
Figure 6.13 Commodities bought by the respondents	156
Figure 6.14 Perceptions about the shopping activity	157
Figure 6.15 Way-finding reasons	158
Figure 6.16 Perceptions about the locations	158
Figure 6.17 Spatial preference	159
Figure 6.18 Age group of the respondents	161
Figure 6.19 Frequencies’ correlation	163
Figure 6.20 Groups of frequency co-relations	164



<b>Chapter 7 Conclusion</b>	
Figure 7.1 Temple streets of Nanganallur	174
Figure 7.2 The commercial corridors of the city	177
Figure 7.3 Shopping types and land uses – Mylapore	179
Figure 7.4 Shops selling religious commodities	180
Figure 7.5 Shops selling convenience commodities	180
Figure 7.6 Shops selling durable commodities	180

## List of tables

<b>Chapter 1 Introduction</b>	
Table 1.1 Political and geographical description of the Chennai city	9

<b>Chapter 2 Research methodology</b>	
Table 2.1 Definitions of case study research	32
Table 2.2 Objectives, chapters, processes and method of study	34
Table 2.3 Tools used for spatial study	38
Table 2.4 Census data on age distribution	41

<b>Chapter 3 International religious public places</b>	
Table 3.1 Comparison between English and Iranian historic cities	62

<b>Chapter 4 Historical perspective</b>	
Table 4.1 The historic phases of the city	68
Table 4.2 The <i>Varna</i> or the caste system of the medieval period	71
Table 4.3 Three phases of centralising the control through the temples	75
Table 4.4 The spatial divisions	80
Table 4.5 Description of spatial and social aspects of the temples	84
Table 4.6 Two important temple villages	88
Table 4.7 List of temples built during the British period	93
Table 4.8 Shifting roles of the temples and the shifting relationship of the temple and economic activities	104

<b>Chapter 5 Spatial Study</b>	
Table 5.1 Case study temples and the three scales of retail activity	107
Table 5.2 Syntactic values of the various parts of the world	110
Table 5.3 The case study temples and the Syntax values	110
Table 5.4 Grouping of the major roads based on the levels of Global Integration	112
Table 5.5 Grouping of the case study temples based on the Global Integration values	112

<b>Chapter 5 – contd.</b>	
Table 5.6 Global integration values and scales of retail activities of the temples	119
Table 5.7 Local integration values and scales of retail activities of the temples	123
Table 5.8 Spatial typologies	130
Table 5.9 Spatial characteristics - Local Integration values of the Space Syntax	134
Table 5.10 Spatial characteristics - Local level land use	135
Table 5.11 Spatial characteristics - Function of the temple streets	136
Table 5.12 Spatial characteristics - Location of the temple and its tank	137

<b>Chapter 6 Social Study</b>	
Table 6.1 Historic periods of the temples	146
Table 6.2 Legends and miracles	146
Table 6.3 Number of festivals	147
Table 6.4 Age and gender of the respondents	149
Table 6.5 Generally agreed statements	165
Table 6.6 Social patterns	166

<b>Chapter 7 Conclusion</b>	
Table 7.1 Space Syntax insights – Comparison of the spatial typologies and social shopping types	182



# Chapter 1

## Introduction

### 1.1 Research motivation

The research began in response to personal experiences and observation of events. The author's home town is Srirangam, a temple town of southern India, and she has always visited, once a year, the town and Sri Ranganathar Temple with her father, Mr. Pattabiraman Srirangam, for the temple-related services. The walks taken by the author on the commercial streets of the temple complex was the initial drive for the thesis.

The author is a resident of Chennai city, which is an ideal example of a city which has many temples in its urban landscape, each having varied commercial activity around them. Initially, the research proposition was to examine how spiritual places have to be conserved and kept distinct from the consumerist and retail activity that surrounds them, however, the proposition then changed to become a study focusing on the temple *and* the commercial activities around them. At the same time, at the beginning of the PhD, the author realised that acquiring a contextual understanding of the temples was necessary, prior to initiating and progressing any conservation or urban design proposals; the contextual meanings of the physical landscape had to be examined first and then, based on those findings, draft plans, implementation frameworks and recommendations could follow.

Buddhism and Hinduism adhere to the concept of '*Nirvana*', the act of removing material desires from the mind, in order to reach God permanently, i.e., a status of non-reincarnation. The Prophet Mohammad called Arabic market places 'places for evil', because of the number of rich people there who oppressed others and the many people who suffered from the lack of regulations (Gharipour, 2003). The Prophet stipulates rules and regulations in relation to the market places near the Friday mosques. Jesus Christ said (New Testament, John, Chapter 2) that commercial activity inside a church was a contamination and therefore, the commercial activity should be removed. All these viewpoints suggest that the spatial association of retail activity to a place of worship was

a valid aspect and given serious consideration in various parts and belief systems of the world.

The existence together of temple and retail activity presents a scene that has a continuum and at the same time, is witness to a change in its use, exemplified by: both historic and contemporary styles; traditional and modern attitudes; spiritual and material values, core and peripheral worship and activity; interior and exterior spatial forms; conservation and consumption; stasis and fluidity, visually, in the temple's use; centrifugal and centripetal forces in its concentration; this change and continuum is both narrative and analytical if one is poetic, or scientific, epigraphic and numismatic if one is of a numerate bent.

The temple is a socially valid public place in Chennai city, where Hinduism predominates, not just as a place of worship but as a way of life for its people. Even 20 years ago, the author remembers seeing the temples surrounded by green trees and blue water. Much more recently, whilst the city has expanded tremendously in terms of its extent and use, there has been a transformation of the temple's surrounding physical environment, too. The traditional temple locations of Chennai, inevitably, have met with retail development around them, meaning that a shift has occurred in the place characteristics of the temples, from one of tranquillity and spirituality, to their being part of the busy streets of the city.

Thus, with the initial drive to highlight the importance of and solve the issues relating to the temples of Chennai city, the research interest was to study the differences and similarities of retail use at the various temple locations of the city. The research focus is on the temple-retail paradigm and is an investigation of the relationship of the temples to the retail activities at temple-locations. The aim of the research is to find the types of relationships that exist between the temples and retail activity in the city of Chennai.

The key aspects that would help the author's initial understanding and offer a starting point for her research were the contexts of: a) the Hindu temple b) the city of Chennai, and c) the prevailing temple-retail paradigm and these key aspects will be described in this chapter. The temples of India have a long history and specifically, those of Chennai have a multi-faceted history and size. Whatever the period and spatial articulation, Appadurai (1978: 47) argues that all the Hindu temples of southern India share a common



cultural and institutional model, although they might reflect it only partially and in more or less truncated forms. It is important, therefore, to understand the central concepts pertaining to the social and spatial contexts of a Hindu temple first.

## 1.2 The Hindu temple

### Hindu way of worship: god, goddess and honours – the social context of temples

Hinduism fundamentally believes that the god is one, the ultimate, *agama*. The trinity of Hinduism believes in three principal pairs of divinities: Lord Brahma, who creates the lives in the universe and his wife, blesses intellect; Lord Vishnu, who preserves the lives in the universe and his wife, blesses wealth; and Lord Shiva, who terminates the lives in the universe and his wife, blesses courage. Under this trinity there are numerous representations of gods (see Figure 1.1). Hinduism perceives the gods and goddesses as contexts of beliefs; the contexts are numerous and for each of these beliefs, there are numerous manifestations of a particular story, or a context of beliefs behind it; and for every context, there exists a temple, resulting in numerous temples dotting the Indian landscape and the temples are designed to suit a particular form of worship.

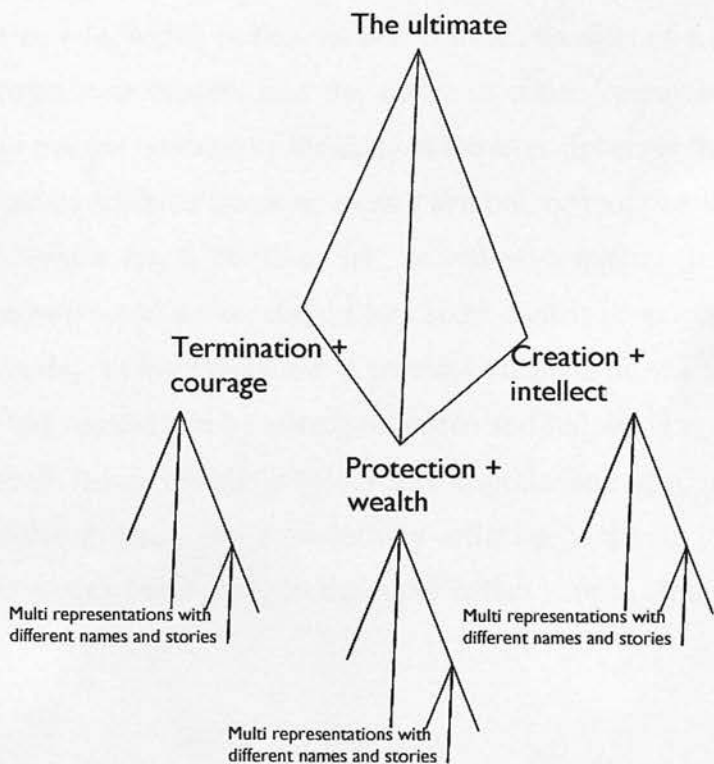


Figure 1.1 Multi representations of the Hindu gods

Appadurai (1978: 48) defines the god of a Hindu temple as one who constitutes his own separate identity; who is made of stone, but who lives in a palace, eats, sleeps, processes, governs and blesses. People enshrine a stone figure as a paradigmatic sovereign, and make it the focus of a complex and dramatic ritual and re-distributive process. The economic transaction is included in the process of worship. Appadurai (1980: 63) mentions that worship (*Puja*) reflects the extremely complex process of religious evolution through the history of south India. Firstly, people offer flowers or food to the deity, secondly, the priest ritually gives these offerings to the deity and thirdly, the offerings are blessed and given back or 're-distributed' to the worshippers. The redistribution process is a moral and economic transaction, with the deity standing at the centre of the temple; these redistributed leavings of the deity are known as "honours", and they are subject to variation and fluidity, both in their content as well as their recipients. But those honours, as Appadurai (1980: 67) puts it, are not simply denotative emblems of rank or status; they are seen to be constitutive features of culturally privileged roles in relation to the deity.

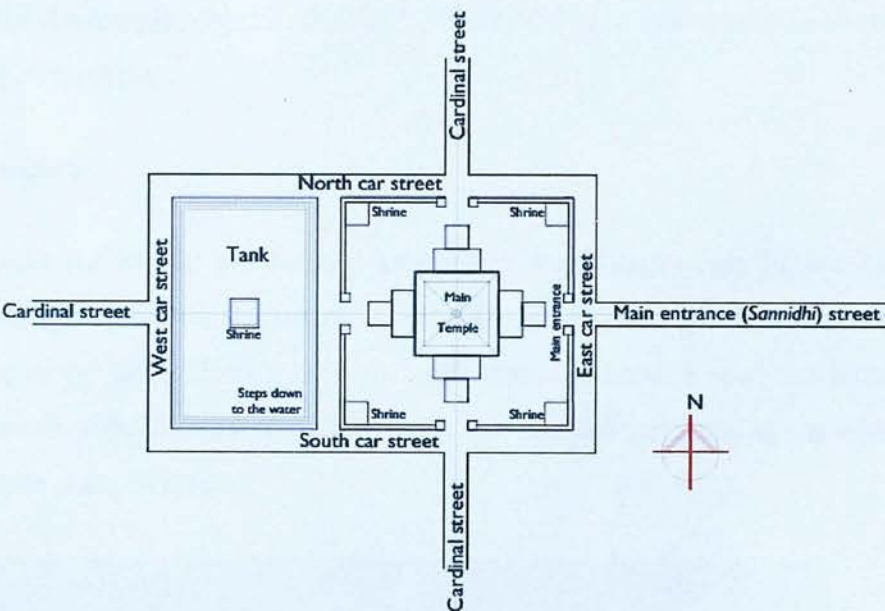
Appadurai (1980: 44) defines a temple as a combination of three attributes: a) as a sacred space, the temple is an architectural entity, which provides a royal abode for the deity enshrined in it, who is conceived of as a contextual sovereign; b) as a process, the temple has a redistributive role, which in this cultural context, consists of a continuous flow of transactions between worshippers and the deity, in which resources and services are gifted to the deity and are returned by the deity to the worshippers in the form of "shares", demarcated by certain kinds of honours; c) as a symbol, or more accurately, as a system of symbols, the temple has a "meta-social" or reflexive quality. It serves, Appadurai continues, to dramatise and define certain key south Indian ideas concerning authority, exchange and worship, at the same time, it provides an arena in which social relations in the broader societal context can be tested, contested and refined. These three elementary features of the south Indian temple, whereby it is a special sort of royal abode, a specific sort of redistributive process, and a powerfully reflexive symbolic system, provide the basic cultural elements of continuity in the south Indian temple, from the pre-British era to the present.



**The temple, its tank and car-streets – the spatial context of the temple**

**a) The temple**

Hancock (2002: 30) writes that the temples can be regarded as a social space, a representation of space as cosmological wholes, icons of Hindu culture and that the temples exist as ensembles of spatial practices, acts of material, social and cultural production of space. The temple spatial planning (see Figures 1.2 and 1.3) is an axial composition of open and built forms, the art of tropical place making (Bharne, 2004: 17). In explaining the symbolic meaning of Indian temples, Hardy (2002: 108) argues that the building fenestration is geometrical with projections, staggering, splitting and bustling of boundaries that are all the means of expressing movement in the surrounding open space.



**Figure 1.2 Conceptual layout of the temple, tank and streets**



**Figure 1.3 Hindu temple**  
The Hoysala temples in Karnataka



In explaining the symbolic meaning of Indian temples, Hardy (2002: 108) argues that the building fenestration is geometrical with projections, staggering, splitting and bustling of boundaries that are all the means of expressing movement in the surrounding open space. The movement inside the temples is presented as symbolic in the temple's varied texture, in all directions, all the forms and principles of manifestation towards the highest point above the body of the temple, the *vimana* or the shrine tower. Hardy continues, it is outwards and downwards which have to be experienced as the directions of the temples' physical manifestation, with inwards and upwards as the directions of the devotee's aspiration towards union. A pilgrim may follow a pathway that represents the universe from the centre to the periphery or that mimics the evolution of the universe from creation to death (Malville, 1999). The spatial organisation of many sanctuaries or shrines, within the boundary of the temple, creates 'fluidity' (Mack, 1999) in movement as these are the targets of each movement.

#### **b) The temple tank**

The temple tanks (or *kunds*) are defined as reservoirs and tanks (see Figure 1.4), with steps, and are associated with the temple. Tanks are water-bodies, usually 15'-20' deep, and are protected by an enclosure or wall, with steps all around used for bathing and performing sacred rituals (Raman, 2002: 33); the embankment-walls are constructed usually of granite slabs or brick.



**Figure 1.4 Temple tank**  
**Change of figure**



In ancient temples, one tank inside the temple premises and one outside is common (Ganesan and Krishnamurthy, 2002: 51). At times they were constructed inside the temple precincts. Generally, the tank outside the temple is bigger than the inner one. Historically, these tanks are used for temple rituals and as a source of drinking water serving the settlement. Bathing in the sacred waters of a temple tank was believed to relieve worshippers of afflictions such as leprosy and blindness.

**c) The temple-car streets**

The temple is more than an architectural masterpiece and is a significant urban element. The temples have a particular urban configuration with the central core temple and open space, a tank at a reasonably close location and the four streets on cardinal directions. Almost every traditional temple of south India has a tank, it also has streets running around the temple, and sometimes including their tanks, in all four cardinal directions (see Figure 1.2).



**Figure 1.5 Temple-car festival**

These streets, the temple-car streets, are lively and colourful during religious festival times. During the car festival, the deity sits in the temple car or chariot, (the car is tied with a rope which the devotees pull to move the car), and the God ‘sees’ and ‘protects’ the people by travelling through the residential streets (see Figure 1.5).

The spatial combination of the architectural masterpiece of a temple, together with its car-streets and tanks, form a distinct urban configuration of the temple locations. The increased social importance of the temples and the method of worship, which includes economic activity inside the temple along with spatial distinction, all offer a strong ground on which to build the research.



### 1.3 The city of Chennai

Chennai is the fourth largest metropolitan city of India (see Figure 1.6) and is the capital of the state of Tamil Nadu. Chennai is the case-study city of the thesis and is the best example of a city that has numerous temples pervading its urban landscape. The city is a place where the ancient and modern co-exist; it is a city of everyday life; and does accommodate highly varied categories of people and often presents a mixed land use.

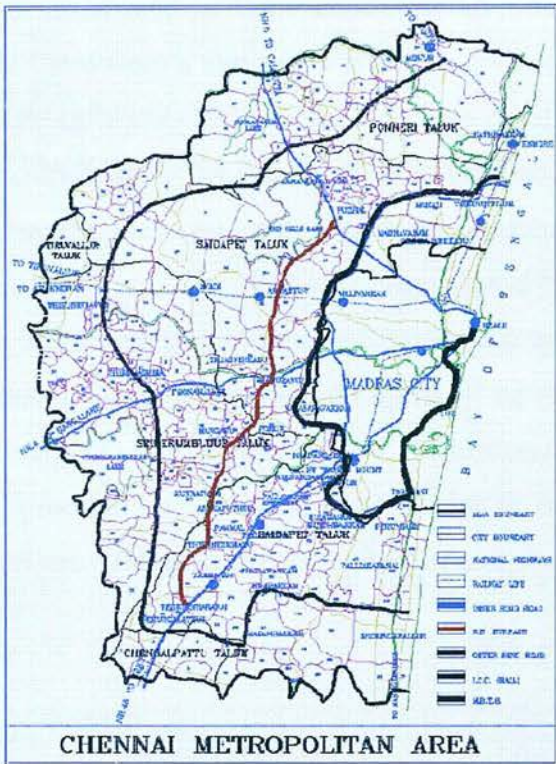


Figure 1.6 Chennai – city and metropolitan boundaries

Chennai is situated at the north-eastern end of the Tamil Nadu state on the coast of the Bay of Bengal. It lies between  $12^{\circ} 9'$  and  $13^{\circ} 9'$  on the northern latitude and  $80^{\circ} 12'$  and  $80^{\circ} 19'$  on the eastern longitude. It is bound by the Bay of Bengal in the east and on the remaining three sides, by the local districts of the Tamil Nadu state. The city has a tropical climate with warm and humid weather every day. The minimum temperature ranges from  $21^{\circ}$  to  $24^{\circ}$  from December to February and the maximum temperature recorded  $37^{\circ}$  was in May. Mean relative humidity is high throughout the year, and varies from 65% in May-July to 80% in October- December. Chennai is a coastal city, located in the 'Deccan Plateau' with mostly plain-terrain.

Chennai city (see Figure 1.6) area (Chennai City Area, the CCA) is 172 square kilometres and the city’s limit stretches to 26.5 km by 12.5 km in North-South and East-West directions, respectively. It has a population of 4,343,645 (Census, 2001); the density is 24,963 persons per square kilometre with a population growth rate of 11.12% in the last decade. The metropolitan area (Chennai Metropolitan Area, the CMA) is 1072 square kilometres with a population of 6,423,658 (Census, 2001).

Two points are usually mentioned in the literature about Chennai, that the city is an unplanned one and that there were a number of traditional villages from which gradually developed a city throughout history. The historic periods of Chennai city fall into three phases, namely, the pre-British, British and Post-Independence phases. Chennai, originally known as Madras Pattinam, was a part of Thodanimandalam and ruled by several pre-British dynasties from 2<sup>nd</sup> to 17<sup>th</sup> centuries AD and by the British from 17<sup>th</sup> to 20<sup>th</sup> centuries AD. This space was part of larger political-geographic limits during the pre-British phases (the Chola in 2<sup>nd</sup> century AD and again 9<sup>th</sup> century to 13<sup>th</sup> centuries AD; Pallava in 3<sup>rd</sup> to 9<sup>th</sup> century AD; Pandaya in 13<sup>th</sup> and 14<sup>th</sup> centuries AD; Vijayanagar in 14<sup>th</sup> to 17<sup>th</sup> centuries AD dynasties) and became a prime city in the British period. These historic phases have definite relationship with the spatial morphology of the city as shown in the Table 1.1.

Table 1.1 Political and geographical description of Chennai city		
Period	Name of the villages	Description
Pre-British period 2 <sup>nd</sup> to 17 <sup>th</sup> centuries AD	Mylapore, Thiruvannamur, Vysarpadi, Thiruvettiyur.	Temple villages pertaining to the ‘temple urbanism’.
British period 17 <sup>th</sup> to 20 <sup>th</sup> centuries AD	George Town and the Fort St. George	Development of the grid pattern of the British for the first time in the city.
	Thiruvottiyur, Vysarpadi, Kathivakkam, Nungambakkam and Satangadu	These pre-British villages were gifted to the British
	Chintadripet, Vepery, Perambur and Periamet	These villages grew near the centre
	T.Nagar and C.I.T Nagar	Development of new British cantonment settlements
	Thiruvannamur and Mylapore	The pre-British villages were added into the city’s boundary.

Chennai’s urban landscape origins can be best illustrated by using the descriptions of Gosling and Maitland (1984: 25). The city is a mix of ‘natural and scientific’ models. To explain, i) natural models: a) the ‘steady-state origin’: created by the needs of a society grew gradually, e.g., the traditional settlements at Mylapore, Vadapalani, Thiruvannamur,



b) the big-bang origin: the British created a settlement, in a place gifted by the then rulers, the Naiks (Pasupathan, 1967), George Town for the local worker groups, and the cantonment settlements, like CIT Nagar and T Nagar and ii) scientific model: the city is more recently based on an 'arts and science model' where contemporary ideas, mostly borrowed from the West, have been transplanted into the city.

Chennai's urban space was, before 1640, a land of a number of temple settlements, each planned according to temple urbanism (900 AD) and traditional world view in which every settlement was seen as a micro-cosmos and on the traditional south Indian Dravidian style of architecture. Chennai became a city during the British period and is predominantly a colonial city. The British buildings, both public and private, manifest the Indo-Saracenic architectural style (Muthiah, 1994). This style is a blend of Hindu ornamentation, European classical with Mughal and Ottoman influences Chennai now has many large scale developments like multi-storey flats and office buildings, widened roads, new industrial complexes (especially IT, chemical, electronic and car assembly plants), shopping malls built in contemporary western style at various but significant locations of the city. Therefore, the city is a mix of local and global styles of architecture and urbanism. Chennai has seen a capitalist transformation and there had been increased Hindu nationalist sentiment in the past decade (Hancock, 2002: 15).

Chennai has undergone many changes in its land uses over the last 40 years. The trend is that whilst open space is allotted for new residential layouts on the periphery; the conversion of residential to commercial or retail use is happening in the city centre. The increase in the commercial land use of the city has doubled in the past 20 years. The conversion of land use has displaced many of its poor communities to the city's outskirts. The spiralling land values have pushed residential land use towards the peripheral zones of the city (Appasswamy, 1999). Population variation within Chennai city, the different zones (as defined by the 1971 Census) are not growing uniformly, i.e., the trade and traditional zones are of higher density in population than the new developments (Sachithanandan, 1994). This population variation changes the zonal character from residential and non-residential thus making the traditional temple landscape distinctly different from the rest of the city. The city surprisingly has agricultural (1.45%) and forest (2.4%) land well within the city's limit.

## **Trade and Chennai city**

Chennai was founded in 1639 as a trade centre (Paupathan, 1967). Business first started in Chennai (17<sup>th</sup> century) because of its spatial potential as a coastal port. The port provided access for both local and supra-local traders like the British and French. Its urban nexus with northern India and trade routes with inland cities allowed the potential for Chennai to grow into the commercial and political capital of south India. Commerce grew exponentially, alongside population growth and immigration during the 18<sup>th</sup> and 19<sup>th</sup> centuries. Chennai is now a mix of contemporary industry and traditional caste-based businesses (for example, weavers, jewellers and even agriculturalists).

Spodek (1980) explains that in the context of trading groups in south India, the system of trade did not follow exactly the same distribution as the system of cities. In south India, he explains that the systems of communication, often centering on interpersonal, caste and religious ties, were key to trade. During the British period (1600-1947), Chennai became an important trading location and it was primarily a trade-based city. This period saw the development of both international trade relationships and local 'portfolio capitalists' (Subramanyam & Bayly's work (1990) as noted in Morrison, 1997: 87 & 101), which was based on caste networks.

The post-Independence city has experienced the tremendous growth of shopping developments, which are mostly unplanned and they have grown erratically, rather than according to any planned developments. In India, mall space, from a meagre one million square feet in 2002, is expected to touch 60 million square feet by the end of 2008, according to Jones Lang LaSalle's third annual Retailer Sentiment Survey-Asia. Chennai is a Tier 2 global city in India and has been identified for its retail potential by global markets (Kelly, 2006). There are, at present (2007), new proposals to build seven shopping malls; two in the city and five in the southern part of the metropolitan area. Globalisation essentially involves the widespread diffusion of western materialist values. On the one hand, the developmental process due to globalisation is gradually swallowing up traditional ways of thinking and living and therefore inducing 'rapid culture change' (Rapoport, 1994: 21); wiping out small traders; bringing about lopsided development, widening the divide between the rich and the poor; the urban and the rural population and undermining indigenous crafts (Mehrotra, 2001). On the other hand, for a higher income



group of the urban population, it has led to an exposure to information technology and access to contemporary communication tools.

The effects of globalisation on commercial land use in the city (Srirangam, 2003) are as follows:

- The characteristic of global economic inter-dependency is inducing in Chennai a decentralization of production yet a centralisation of control, resulting in high production rates. This production is globally influenced, and yet there is a local culture in favour of mass-produced, global products (from a T-shirt to a car), and this has resulted in a considerable increase in commercial land use and a change in land use from residential to commercial all over the city.
- The city presently has five types of shopping landscapes, (i) shopping streets (traditional and contemporary), (ii) markets (traditional), (iii) shopping malls/complexes (contemporary), (iv) departmental stores (traditional and contemporary) and (v) supermarkets (contemporary) as well as the virtual Tele-shopping Networks (TSN). Due to increased communication systems and the impact of global culture, the traditional market typology is losing its importance. The concepts of shopping malls and supermarkets have physically invaded the city.
- Globalisation has a number of profound effects upon urban social geography. Social polarization (Knox and Pinch, 2000), i.e., growing social inequalities, has made the city more fragmented and continuously restructured. This can be observed by the evacuation of residences, at the city centre which are generally sold for new commercial land uses.

## Urban chaos

Appaswamy, (1999) the Director of Madras Institute of Development Studies, mentions three major reasons for the 'urban chaos' of the city: a) the linear or arithmetic progression of developments rather than a holistic approach of planning, b) sudden increase in the population growth during 1950s (22.6%) and 1960s (47.1%) and c) the influx of a significant number of poor people. Appaswamy (1999) also mentions the unplanned commercial developments at the traditional zones of the city and welcomes the public to 'articulate their concerns about the future course of urban development'. Chennai city does not have an order in the organisation of its spatial forms and functions; any style of architecture is found anywhere; built forms or the Floor Space Index (FSI) mainly goes by the width of the access road of the site and the dimension of the site itself (Development Control Rules, DCR 2000); land use is basically in the hands of the applicants, the public; there is a diffusion of 'urbanness' in the city and its urban

agglomeration because of its massive size and mixed land use; it has no particular central core – a central core is repeated in many places of the city; the urban poor may encroach spontaneously on any riverside, which has become a major concern for government which has attempted many regeneration proposals and schemes (for example, ‘Sites and Services Scheme’); even when proposals are implemented, post-occupancy, the targeted urban poor comfortably sell the house for money – requiring the legal systems to be tightened-up; public spaces are at risk of poor environmental quality control for anyone can chop down a tree and spaces are often used as waste disposal areas including the city’s most beautiful aspect – the beach. Chaos is everywhere - that is part of Chennai too.

### **Temples in Chennai city**

Of all the metropolitan cities of India, Chennai city is known for its numerous temples dotting its urban landscape. These temples vary in size and grandeur ranging from small ‘pavement shrines’ to central magnificent ‘village temples’ (Suresh, 2003: 306). Many of the Chennai’s magnificent temples have been important throughout history. There is a traditional Tamil adage that says: ‘do not reside in a village that has no temple’. In this city, almost every street has a temple; if not at the centre of a locality, as a niche on a wall facing the street as pavement shrines. To put it in Lynch’s (1960) way, the ‘images’ of these temples vary from as an element on a ‘path’ to a grand ‘landmark’ of the city.

The only extant publication on the temples of Chennai is “The Temple Directory of Madras City” by the Census Department, published in 1964. This directory noted that there were 288 temples in the city that had 100 planning divisions by then. These temples are listed under each division and whether a community or government body manages the temple; the temples are also listed according to the presiding deity, the area, caste and wealth, like the gold and land owned by the temple.

Another work on the Chennai temples was published by the Indian National Trust for Art and Cultural Heritage (INTACH) (Suresh, 2003), which classifies the temples of Chennai into four groups; the village temples that existed before the city was established, the colonial temples built during the British period, the temples built after 1947 and lastly, the pavement shrines that have long been a part of the city. Suresh mentions that an estimate published in 1981 recorded that the city and its suburbs had over 600 temples (Suresh,



2003: 297); that number is probably much larger by now. Suresh mentions, that the colonial temples are in the George Town area (the Central Business District of the city) and all the other types are in all parts of the city and its suburbs.

In Chennai, though located outside the temple premises, the temple-tanks are mostly fenced and public access, which is given mostly for ritual purposes, like annual floating festivals. In 2004, the temple management of the Sri Kapaleeswarar Temple, Mylapore, bought water to fill the dried-up tank for the annual *Brahmotsavam* festival; to avoid the water being absorbed into the ground, they laid plastic sheets on the ground of the tank and then poured the water in. In 2004, work by the C.P.R. Environmental Education Centre on the temple tanks of Chennai, as water resources, found that only eight out of 50 temple tanks had good water; 27 of them were dry; 15 had contaminated water.

New temples have been built in the suburbs of Chennai city. 'The Bureaucratisation of Temple Architecture' (MacRae, 2004) implies that a person should be qualified and with an Hindu Religious and Charitable Endowment Board (HRCE) licence to design a temple. The contemporary trends in religious architecture are evident in three ways (Menon, 1997): firstly, there is a continuity of traditional build, designed by traditional craftsmen like Mr Sri Ganapathy Sthapathy; secondly, there is a trend for kitsch which is widely manifest in the example of the huge Chhattarpur temple complex in New Delhi; thirdly, there have been few attempts to develop a 'modern' temple building idiom like the ISKCON temple complex of Hyderabad. Of all these, the first type appears in Chennai as the *Sthapathy* (meaning temple architect) who is from the city and is the chief architect at the HRCE.

## **1.4 Temple-retail paradigm**

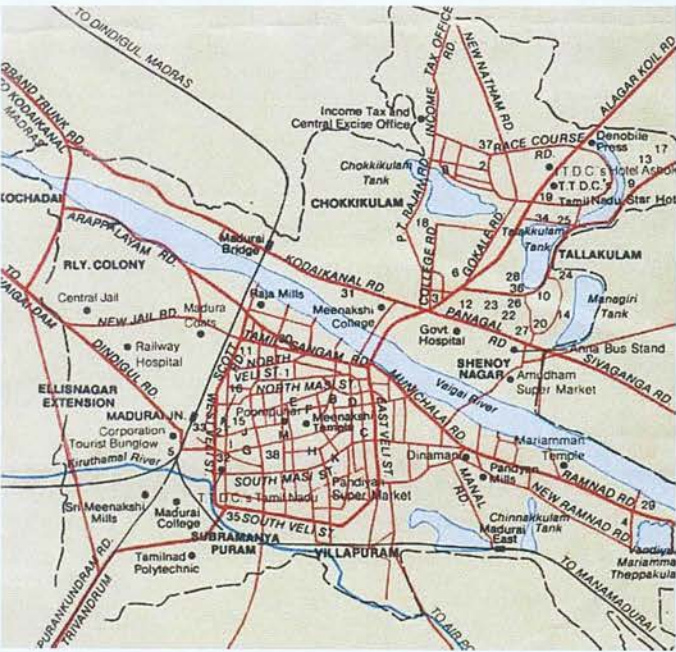
### **1.4.1 The context of South India**

Of all the different expressions of South Indian architecture, surely the highest stylistic architectural and urban achievements are the temples and the temple urbanism of the medieval period. During that period, which was the peak time for the local regimes, the urban configuration of the Tamil's 'ceremonial cities' (Lewadowski, 1977: 187) had a temple at their core, around which the settlements grew. In a traditional world view, the

temples are seen as micro-cosmos and therefore, occupy the central-core location of a settlement. The temple-retail paradigm is defined here as the occurrence of retail activity at the temple-locations. Such an occurrence can be observed in many cities today at these temple-locations, which have become important retail cores of the city itself. These historic locations are now of increasing concern from planning and conservation points of view.

**Madurai**

Waghorne (2004: 54) writes: ‘In Kumbakonam, a city without a single central temple, a commercial corridor newly built in 1620 linked two major temples. In Madurai, a flourishing market area surrounded the city’s great central shrine’. Sri Minakshiamman temple (see Figure 1.7) marks the origin of the city of Madurai; it was the ceremonial and royal temple of the Chola rulers (AD 850).



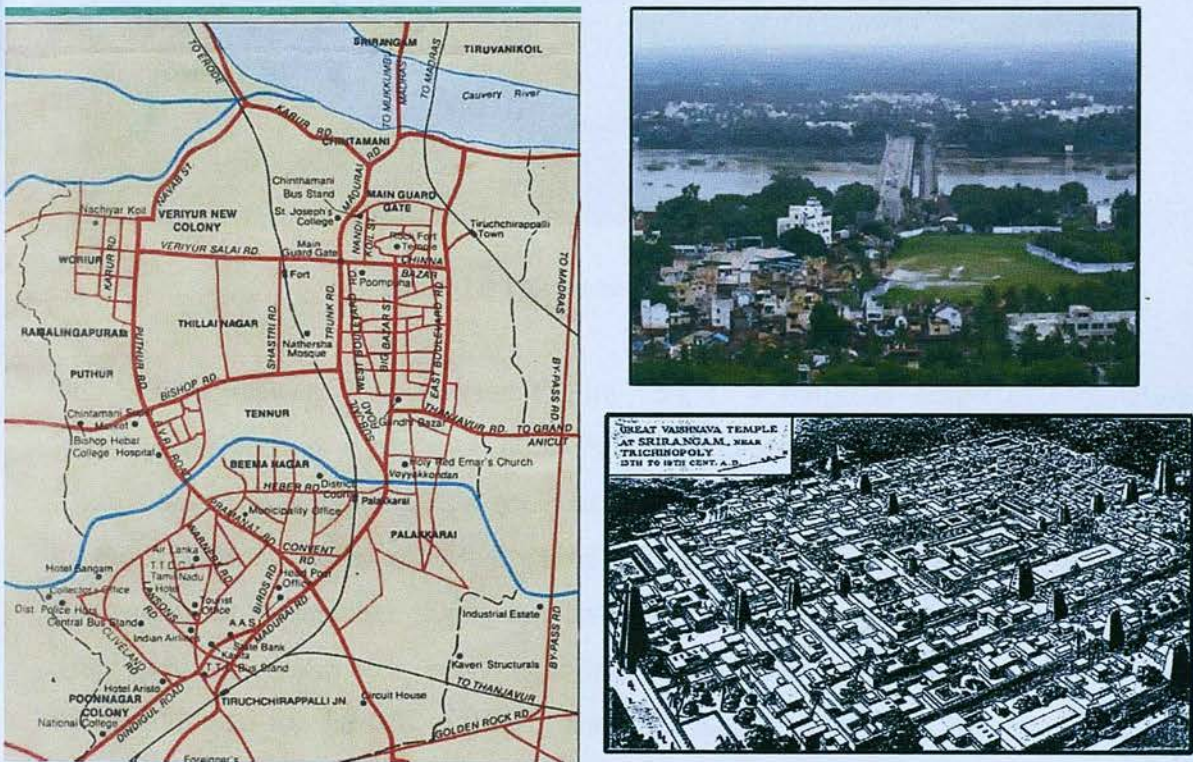
**Figure 1.7 Madurai city and Sri Minakshmi Amman Temple**

Sri Minakshiamman temple is the best example of all the Tamil Nadu cases in terms of the retail developments around it. The commercial streets of the city are the axial streets springing from the temple complex and the *gopurams* or the gateways are well-defined commercial spaces inside the temple precincts.



**Srirangam and Trichy**

Srirangam is an island town surrounded by the River Cauvery. The Sri Ranganathar temple complex is the next best example, where a series of progressive concentric layouts of temple settlements are accessed by cardinal streets, which are currently being transformed into commercial streets. It is interesting to note that the connecting street (see Figure 1.8) of the temple of its neighbouring city, Sri Uchipillayar temple of Trichy, is the commercial corridor of this region.



**Figure 1.8** Trichy city (left), the connecting bridge between the midland city, Trichy and an island town, Srirangam (right, above) and the Srirangam temple complex (right, below)

**Thiruvannamalai**

A lesson, to be learnt from a controversy arose in 2002, is that the retail development surrounding the temple location is a socially valid spatial landscape. The Archaeological Survey of India (ASI) declared a temple in Tamil Nadu as a monument of national importance in the year 2002.





**Figure 1.9 Thiruvannamalai temple complex**

Sri Arunahcaleswara Temple (see Figure 1.9), is a religious centre of international importance, more as a place of faith than as a site of archaeological importance, at Thiruvannamalai, a town 200 km south of Chennai, and it was proposed for conservation by the ASI. Many traders protested, (THE HINDU Magazine, 2002) for two reasons; that this would cut the number of pilgrims coming in and that it would affect their business. They argued that the temple was a living one and not a monument and that it was unconstitutional for the ASI to take it over. The ASI explained that the temple rituals or the administration would not be taken over, but that the developments around the temple still needed to be controlled.

The temple was by then described as having around it: ‘commerce was sitting on every tree’ (THE HINDU Magazine, 2002). The initial proposal was that an area with a radius of up to 300 metres from the temple should be ‘prohibited and regulated’; no mining or construction could take place within the first 100-metre radius; and any such activity in the next 200-metre radius would have to receive the approval of the ASI, it added. After much public opposition through strikes and political leaders’ opinions, the proposal finally was not to disturb the existing structures within a 100 m radius from the temple, but any new constructions would be banned.



The importance of the phenomenon of the association of retail activity with the temple locations is evident spatially in the state of Tamil Nadu and is socially valid amongst the Hindus, who make up the majority of the state's population. Chennai is the state capital and its temples are the prime focus of the research, in terms of analysing the spatial association between the temple and commerce. Unlike the ceremonial cities, Chennai city is quite different in a) having many temples, as opposed to one single temple at the centre of the city, and b) having emerged from various historic phases which all had different political ideologies. These variations inform the finding that the city has temples belonging to different periods and spatial articulations.

### 1.4.2 The context of Chennai city

Mylapore is one of the traditional settlements with the temple at its centre and is in Chennai city. The local Tamil –literature describes the physical landscape of Mylapore as 'the temple, its tank, its settlement, sweet sugar-cane and wealthy paddy fields and tall



**Figure 1.10 Mylapore in the pre-British period**

(A sketch imagined from the description of Thirumylai (Mylapore) in the *Sangam* literature of the Tamils.)

coconut trees' (see Figure 1.10). The traditional temple settlement of Chennai city has been transformed over the centuries to accommodate commercialisation. Figures 1.11 and 1.12 show the continued importance of these spaces and how they can be understood. In these urban spaces, the needs of the community were always paramount. Initially, most of the communities were agrarian in the pre-British period (see Figure 1.10), then residential



development occurred during the British period (see Figures 1.11 and 1.12) and today, there are highly dense retail developments, even close to the temple.

**Place characteristics**



**Figure 1.11 Mylapore West-car street**  
Left: In the year 1901; Right: In the year 2001



**Figure 1.12 North-car street**  
Left: In the year 1936; Right: In the year 2004

As Hancock (2002: 15) puts it, the traditional temples of Chennai are threatened by unplanned developments rather than by any religious or political battles. Hancock (2002: 30) also mentions that the commercial shops around the temples are ancillary to worship but crucial to temple life. These temples are now facing what Waghorne (2004: 57) calls the ‘urban squeeze of the British period temples’. It is both the traditional and the British temples that face the urban squeeze today. Prasad (1994: 24) states that commercial prospects, far more than tourism, had always been a part of these developments. He adds that the commercial aspect has overwhelmed the balanced relationship with the cultural



aspect of the space; hence it has invaded the qualities of the socio-cultural character of this historic site of worship. There are several reasons for the changes in land use, as this thesis will explain, but it is useful to note here that the change has already had significant impacts in the following aspects:

- (i) traffic congestion: Several streets have been converted into urban thoroughfares or vehicle-carrying paths with no regard for their heritage value, thus making the temple zones into sheer urban transitory nodes. The integrity of inner peace and the spirit of innumerable old settlements are under threat (Prasad, 1994: 25).
- (ii) land values: there has been a demographic evacuation from Chennai city centre: spiralling land values from the CBD have pushed the residential developments towards the fringes. It is common for existing landowners to tend to make use of the commercial potential of the location by either selling or having their own commercial development. This is reflected in the change in land use from residential to commercial and the increase in land values.
- (iii) character: plots have been allocated to facilitate large-scale commercial development. Building uses are being altered to capitalise on the commercial potential of the CBD. The commercialisation of residential buildings is causing a change in land use patterns, family structures and increased land costs. Local landowners make application to decide the land use through the type of their buildings, i.e., either high density residential or retail or corporate office developments. The temple tank can be seen as a western urban square or plaza, around which various economic activities share the space.
- (iv) design standards: new buildings and streets have been constructed to minimal architectural and planning standards. The architecture of the buildings is appropriated from western influence. The integrity of the inner place and old settlements is rather disregarded; 'not acknowledging the culture as a necessary dimension of development' (Prasad, 2004: 25), is not affirming cultural identities.
- (v) environmental quality: over congestion in terms of population and traffic causes air and noise pollution, inadequate waste management and ground water scarcity

in the city boundary; the temple tanks, in highly populated urban contexts, are ill-maintained, proven by the excess refuse disposal or the complete absence of water during the summer.

- (vi) privacy: there has been an intrusion of privacy on the religious sites and a loss of heritage and people's local identity. The perception of local people with reference to their heritage has been changed (Prasad, 1994: 25) to that of a city dweller's perception.

Many of the temples are of historic value and the local architects keep stressing the need to introduce conservation standards in and around the temples. An organisation called the INTACH (Indian National Trust for Architectural and Conservation Heritage) volunteered to study (INTACH study, 2001) and propose conservation standards for two temple locations of the city, namely, Mylapore Sri Kapaleeswarar temple and Thiruvannamur Sri Marundeeswarar temple. Whilst the proposal for Mylapore has still to be implemented, the proposal for Thiruvannamur temple has made a difference to the locality (Waghorne, 2004: 54).

The effectiveness of the HRCE, a government body that manages the Hindu temples of Chennai, has been criticised by temple priests, devotees, and local community groups, as well as by INTACH regarding the physical conditions of and budgetary allocations to the Thiruvannamur temple (Hancock, 2002: 20). They advised the repair and recharge of the temple tank by cleaning and restoring its stone frame and surrounding walls, as well as by recharging the aquifer system that feeds the tank. In taking these steps, INTACH took strategic advantage of the existing dissatisfaction with the HRCE management by temple users. They offered suggestions for the landscape design, restoration and conservation of the temple and its precincts. INTACH has been partially successful in implementing their recommendations to remove the shops adjacent to the tank but the flower stalls still remain in the eastern car street (*Mada veedi* which is the temple-car processional street).

India is known for its rich and diverse cultural heritage but paradoxically to this day, Indian historical architecture is largely outside the government's agenda of legal protection and management (Thakur, 2004). The existing Monuments Act by the Archeological Survey of India (ASI) protects only about 5000 structures, out of which, 15



monuments are from Chennai, with no inclusion of its temples (ASI list by 2004). There is no protection or set of regulations for non-monumental structures, whole areas and historic cities (Thakur, 2004). The Urban Arts Commission is not established in Chennai whilst it is there for the other three metropolitan cities of India. The historic sites are either totally ignored in terms of development or left with unplanned growth. A policy and action that would engage with both matters is required.

## **Summary**

The city of Chennai with a) its vast extent, such that it has developed into a mega city of India b) its characteristic of being receptive to the impact of globalisation c) its rapid population growth; and d) the extent to which its commercial land use has doubled, all these factors have exacerbated the issue of unplanned development. In order to gain an holistic understanding, it is vital to know how such development of Chennai has shaped the commercial land use at the temple locations.

Chennai has numerous Hindu temples varied in historic backgrounds, sizes and scales of commercialisation. Whilst, Chennai's historic temples have significant urban configurations with a central core at the settlement, the more recent ones simply appear any part of the contemporary developments. Moreover, the temple exists along with a set of urban elements, namely, a tank and four car-streets. Therefore, the configuration of the various temple-locations, in the city, should also be investigated for their relationship with the city's configuration and vice versa.

The continuous significance of commercialisation at the various temple-locations, including those of ceremonial cities, of Tamil Nadu, indicates the importance of the Hindu temple in influencing the surrounding land use. From the social point of view, the activities that relate both the temple to retail (and vice versa) need to be investigated. Whilst, the temple itself encourages 'economic transaction' (Appadurai, 1980: 63) as an act of religious worship inside its premises, the extent of socio-religious ties with retail outside the temple will also be investigated. This also raises the question of whether the social practices of the temple visitors encourage the phenomenon. Since the temple is a

valid public place of Chennai city, it is also important to understand the ways in which the temple is included in the everyday life of Chennai society.

Recently, the conservation of the historic temple sites has become an increasing issue in Chennai. A knowledge of local cultural history is also vital to gaining an understanding of the phenomenon, given the religious symbolism of the temple, marked through years of Indian history. Tamils have had a great association with the temple throughout history and the temple has played a significant part in the cultural history of the Tamils. It is incumbent on scholars to appreciate the change and continuity of the planning concepts and social values of Chennai that have shaped to the phenomenon historically, in so doing, this will enrich an holistic understanding and reveal the phenomenon's complex meaning.

To sum up, in terms of understanding the relationships between the temples and the retail activity adjoining them, it is important to study the spatial configurations of both the city and the temple; the social patterns that relate the temple to the retail along with the deeply routed historic value of the phenomenon. Therefore this thesis focuses on the spatial, social and historical contexts of the Chennai temples. The research works with the objectives, namely, a) to examine the spatial aspects that relate the temples of Chennai today to the adjoining retail activity in the city, b) to explore the social aspects that relate the temples of Chennai today to the adjoining retail activity in the city and c) to gain insights about the phenomenon from a local historic perspective. In order to learn initial lessons, the public places, namely, Middle Eastern mosque and European cathedrals were investigated. This part of the study helps to provide insights into the empirical study method and to place the study of the Indian temple in a broader, international context.



## **Chapter 2**

### **Research methodology**

This chapter describes the approach, propositions, structure and techniques adopted in the research. Two important features, one about the approach and the other about the study method, are described first in order to show how the strategy for and structure of the research were arrived at. The order of the chapters, according to the objectives, and the choice of techniques, according to the sub-objectives, are also explained. The key conclusions suggest the overall research process.

#### **2.1 Spatial and social approach**

Sri Ranganathar temple in the town of Srirangam prompted the author to wish to establish the relationship between a temple and its surrounding land use in the city of Chennai. An important difference between the town of Srirangam and the city of Chennai in terms of the temple and its relationship with the landscape, is that the former place has one dominant central core temple, whilst the latter has multiple temples dotting its urban landscape, of various sizes and historic backgrounds.

The research began with preliminary discussions and site observations at Sri Kapaleeswarar temple at Mylapore, Chennai city. Amongst the hundreds of temples within the city, Sri Kapaleeswarar temple at Mylapore (southern Chennai) is analogous with Sri Rangathar temple at Srirangam, in terms of its historic background, its monumental Dravidian style of architecture and concentric street layout around the temple. The similarities also include: people's movement patterns on the concentric streets as they move towards the temple; the surrounding noise levels, for example, singing can be heard, people can be heard praising the deity; and a few of the residential units are built in a traditional style.

Mylapore is popularly known as the 'commercial and spiritual centre of the city'. The urban land usage at Mylapore, however, has changed from residential to commercial and from low-density to high-density residential units, like multistorey-apartments. When the author spoke to Mylapore locals who had long lived in the neighbourhood

(for example, Mr Sampath, Chair of the Mylapore Residents Association), she found that the retail activity next to the temple had begun first and then the numerous commercial activities apart from the retail activity, like office complexes, had grown exponentially until the situation was arrived at as it exists today. This suggests that the retail activity at Mylapore developed first on a small scale near the temple before it became a commercial node of the city. The temple location has evolved along with commercialisation, and alongside other external processes, such as transportation. Retail activity is the key commercial activity near this historic temple.

The investigation began with the author simply speaking to people at their homes and in the temple, asking their views of the relevance and value of the retail adjoining the temple location. The discussions led to many complex points being articulated in relation to a) people-oriented aspects, for example, spiritual, economic, emotional attachment to the temple, adjacent space and the deity; and to some extent, globalisation and political matters and b) physical aspects, for example, transportation nodes close to the city centre.

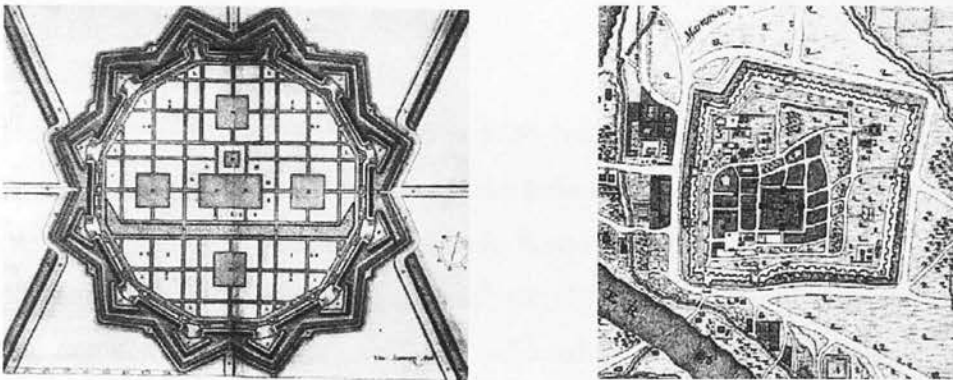
The author also visited many other temple locations of the city where a careful observation of situations and behaviours led to her being able to see that both the temple and the location could be scrutinised for people's movement on those streets. The casual, on-street discussions the author had with Mylapore people elicited from them that they visited the temples, either mostly because of the religious value of the temple and its deity, or because they were simply passing by on those temple streets. On the one hand, people tended to have an 'affiliation' with the urban space because of the social validity of the temple and on the other, because of its relative location in the city. People and their relationship with the physical aspects of urban space are integral to the commercialisation of a location. The author's initial understanding showed her the way to progress her study in terms of analysing the urban context, both spatially and socially.

The social aspect (which is invisible and might be termed the 'energy' or the 'soul' of a place) is what gives life and meaning to the spatial aspect (the tangible, mass or physical structure of the place itself). In lively places, the spatial aspects are inseparable from the expression of social processes and if they are separated, the place



dies and just remains as a physical entity. In this view, architecture or urbanism is a creative synergistic process, that is, the physical attributes have a significant impact on the social process and vice versa. Eventually, both change the other, finally resulting in ever-growing or self-organising spatial forms.

The Italian ideal city of Vincenzo Scamozzi (1548-1616) is a perfect example of a geometrical configuration, and ‘expresses and embodies deeply-held intellectual and political convictions’ (Worpole, 2000: 19). Every configuration of built space and its relationship to the street and the city beyond, always expresses a model or an ideal social relationship. This ‘idealism’ can be compared to the Vedic town planning (originated in 2400 BC) model of India (see Figure 2.1). In this model, the social aspect is the key to the spatial configuration of the towns which, ‘ideally’, is exemplified by the geographical assignment of spaces to people, based on their caste or socio-economic status with a temple at its core. It is a moral geography.



**Figure 2.1 (Left) Italian ideal city of the 17<sup>th</sup> century; (Right) Indian Vedic city of the 18<sup>th</sup> century**

Later in medieval India, the integration of the social order into the spatial order was mapped into the landscape, that is, the temple was the centre of a settlement, around which the caste groups settled, according to their socio-economic and religious status. ‘Hindu cosmology’ (Singh and Khan, 1999) provided the fundamental guiding principles for village and town planning in India. The Vedic town-planning principle seems to have been forgotten, but in south India, the idea of spatial assignment, based on socio-economic and religious status, was alive until the British period (AD 1640-1947), with respect to the central temple locations (Champakalakshmi, 1996; and Basu, 1993). Such places offered ‘centrality’ (Sieverts, 2003: 25) in which everything important can be found and from which all major developments start.

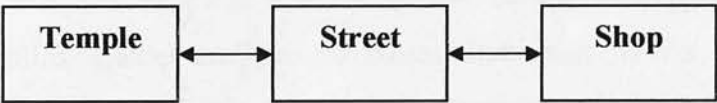
Hinduism is created and refined by groups of people and no single founder or doctrine exists as in other religions like Buddhism, Islam or Christianity; the religion is a way of life and the caste system dictated is about socio-economic (choice of job) and socio-spatial (location of house) lifestyles of the people. There are many Hindu textual sources that offer inspiration and guidance about ways of living. Gita, for example, is a divine discourse and revered as a true source of spiritual knowledge, revealing the purpose and goal of human existence; Ramayana and Mahabharatha are two epics that are regarded as illustrating the best ways to live a good life; the Vedas and Upanishads are explanations of ritual procedures and mainly describe ways to conduct worship at the temples and at domestic shrines. The principles of Hinduism permeate every aspect of life, from everyday chores to education or political practices. The purposes of these texts draw parallels with the ten 'primary messages systems' (PMS) of E. T. Hall (1980: 196 & 197). Whilst all the texts stress the importance of temporality, the Gita dictates the processes for defence and exploitation; the epics explore interaction, association, subsistence, bisexuality, territoriality and play; and the ritual texts focus on learning.

Hinduism has a significant association with spatial manifestations, where often the religious impetus is expressed through the belief in the symbols of sanctity and the rituals of celebrations. A well-kept Hindu house has to have a religiously venerated plant (*tulsi*) and a shrine in the courtyard; the objects, like plants, trees, water, lit oil-lamps, notches for lamps or idols, are believed to be symbols of sanctity within a house. The rituals are performed in places where celebrations occur, like birthdays, marriages, engagements, auspicious days of stars and moons, annual festivals and when paying homage to deceased family members. Although these places vary from houses to community halls, a Hindu temple is the focal point for these occasions. Shrines and temples are numerous in the Tamil landscape and they entail the use of various locations, from a domestic courtyard, to the core of a town. Such sacred spaces are symbolic and behavioural spaces of different groups (Rapoport, 1977: 13). In his descriptions about Indian cities, Geddes (1919) was impressed by the 'homes and shrines' and 'large places and temples' and noted them as having 'civic beauty' and he saw the typical temple town of south India as a complete integration of culture, history and urban forms.



Regional variations, such as the Tamil-Hindu traditions, are still practised and temple receives a large number of visitors every day in Chennai (Suresh, 2003: 305). The temple landscape is, therefore, socially valid and ‘alive’ in terms of a synergistic urban process. Another important point for consideration is that best exemplified by Dumont’s (1970) remark: ‘...the things in India do not exist in themselves but only in relation to others, in a particular place and for particular people’. Geertz’s (1973) definition of culture as ‘an ordered system of meanings and symbols, in terms of which social interaction takes place; the social system is the pattern of social interaction itself’ is evident in the Indian social context. People’s identity is based on a social hierarchy; people socialise, not only to meet a basic human need but also because they hold to a set of unwritten ‘rules’, derived from kinships and relationships. This is a unique and interesting factor about the Indian way of life. Place identity exists mostly in relation to the community temple. The temple was and still is, validated by both social and spatial processes in relation to its settlement.

This thesis investigated a physical happening next to a highly valid social space, i.e., the retail development adjoining the Hindu temple. A major spatial element that connects the temple and retail activity, physically, in the urban configuration, is the street, a public urban space; the street can be seen as a transition space in between these two places of activity: the temple and the shop.



**Figure 2.2 Three components of the urban landscape**

Figure 2.2 is a diagrammatic expression of the spatial parts of the investigation: the temple, the street and the shop. The street marks the urban form and aids movement and activity within it. In public spaces, physical attributes do not stop with the built environment but extend to the urban space and human aspects extend to patterns of certain user-groups. In ‘place theory’, Trancik (1986: 112) states: ‘in abstract, physical terms, space is a bounded or purposeful void with the potential of physically linking things, it only becomes place when it is given a contextual meaning derived

from cultural or regional content'. Public space is an inseparable entity of a two-way process between two components: 'people' and 'place'. Works in public spaces focus on the relationship between people and places, rather than on abstract human needs or place qualities (Carr et al, 1992: 239). Madanipour stresses the importance of a public space allowing differences in a multi-cultural society to be expressed, in order to contribute to a sense of wellbeing (Madanipour, 2004: 276). Frick (2007: 265) argues that public space has to be the decisive component in creating and developing settlement units and that the spatial characteristics of the public space should be 'supportive' to the actions and behavioural patterns of the people. Therefore, spatial qualities, social patterns and their relationships are all important aspects especially for an understanding of the urban process of public places. This thesis argues that on the one hand, spatial locations, and on the other, socio-cultural systems, have a value in the urban process of Chennai city. The spatial and social studies, therefore, are taken forward throughout this thesis as the two methods of investigation.

## **2.2 Retail logic and the research focus**

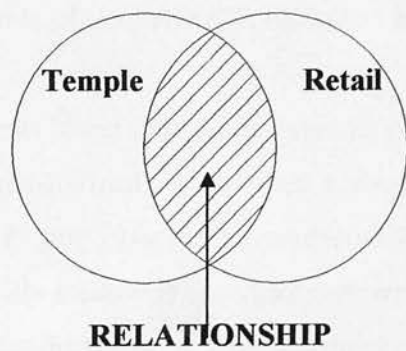
The city of Chennai faces increasing economic growth due to many local and global influences. The local spatial aspects of its coastal location, that allow the city to have more ports and inland connections through a number of national and state highways, primarily offer a decent accessible location for the city. The city acts as a large commercial and industrial centre of South India and has well developed automobile, IT, spinning textiles, leather and pharmaceutical industries. Whilst these aspects attract major domestic retail players, global investors choose the city for the competitive quality of its business environment. Chennai is described as one of three Tier-II global-cities of India and is seen as the first step on which to enter India by global traders. Human resources' availability, telecommunications connectivity, the quality of urban infrastructure (mainly air-connections through an international airport), the transparency of governance, the availability of real estate and the IT skills of the local population, make Chennai a focus of increasing investor activity for global traders (Kelly, 2006). All these local and global influences have increased the physical manifestations of the commercial potential of the city through the floor-space index of buildings and the land-use areas of the city pertaining to retail activity. The



physical types vary from traditional open market spaces to contemporary shopping malls.

Retail land use has its own logic in terms of how it impinges on the city structure; the key aspects are its being accessible and its attractiveness. Transport and pedestrian access are two important aspects that are being considered increasingly in relation to the retail location in any city. Public and car-user transport planning has a strong influence on retail trade (Monheim, 1992). Crowds of people are seen as a catalyst for attracting more retail land use. Hillier et. al. often discovered the influence and relationship of spatial attraction of the urban structure itself, and hence the movement of greater numbers of people, to retail land use of a city. Tokatli and Boyanci (1998: 358), in their discussion of retail as an inherently geographical phenomenon, explained that ‘the locational dynamics of retailers are largely controlled by accessibility, the interaction of threshold and range effects associated with the products they sell, cluster dynamics and consumer attitudes and perceptions.

The thesis interest is to analyse the similarities and differences of retail use at the various temple locations of Chennai. Figure 2.3 below (the hatched area) shows the focus of the research, which is the relationship of the temples to retail activity at Chennai temple-locations.



**Figure 2.3 The research focus**

The retail logics are realised in the thesis and applied appropriately to an investigation of the spatial and social aspects of the temple-locations. For spatial investigations, transport and pedestrian accessibility is assessed through Space Syntax and spatial

attractions are assessed by local level land use analyses, as will be explained in Chapter 5. The retail landscape of the city is also studied to the extent that the logics at the temple locations can be understood. The temples are studied for their specific spatial configuration and the relationship of this configuration to the city structure. In relation to social investigations, a user-orientated analysis was undertaken, as is explained in Chapter 6. The temples are studied in terms of how they attract visitors and the patterns of activities and perceptions that relate them to adjoining retail activity.

## **2.3 Case-study research method**

Case studies are an accepted and common research method in psychology and sociology. There are many definitions of case-study research methods, as is shown in Table 2.1, below. Yin explains that 'the distinctive need for case studies arises out of the desire to understand complex social phenomena' because it covers contextual conditions (Yin, 2003: 2). Yin further defines the case-study research method as, 'an empirical inquiry that investigates a contemporary phenomenon within its real life context; when the boundaries between phenomenon and context are not clearly evident' (Yin, 2003:13). Case study is 'an ideal methodology when a holistic, in-depth investigation is needed' and is known 'as a triangulated research strategy in which the triangulation may occur with data and theories' (Feagin, Orum, & Sjoberg, 1991 in Tellis, 1997: <http://www.nova.edu/ssss/QR/QR3-2/tellis1.html>)

Most of the critical comments about case-study research methods, such as, 'cannot be standardised', 'cannot be generalised', arise when a single case study is chosen for investigation (Tellis, 1997: <http://www.nova.edu/ssss/QR/QR3-2/tellis1.html>). Yin argues that a single case study method is acceptable, provided it meets the established objective of the research. As Christie *et al.* have substantiated, through many literature reviews, that multiple case studies provide a more rigorous and complete approach than single case study research because of the triangulation of evidence (Christie *et al.*, 2000: 15). Tellis explains that and 'multiple cases strengthen the results by replicating the pattern-matching, thus increasing confidence in the robustness of the theory' and the research is effective as a more informed basis for theory development



as the data analysis leads to generalisation through ‘replication logic’ (Christie *et.al.* 2000: 17 and Tellis, 1997: <http://www.nova.edu/ssss/QR/QR3-2/tellis1.html>); this allows for establishing internal validity through ‘pattern matching’ and external validity through replicating the findings beyond the cases studied (Christie *et.al* 2000: 18 and Tellis, 1997: <http://www.nova.edu/ssss/QR/QR3-2/tellis1.html>).

Author /Definition	Hakim 1994	King 1985	McKin-- ney 1966	Patton 1990	Saunders 1981	Smith 1988	Stake 1985	Yin 1989
Holistic	X	X		X				
Absence of control						X		
Rare phenomena						X		
Sources of ideas						X		
Sources of hypotheses						X		
Situation of theory development						X		X
Future systematic research						X		X
Boundaries between phenomena and context are not clearly defined						X		X
Contemporary focus within a real life context				X		X		X
How and why questions						X		X
Little control over events						X		X
Dependent on inductive reasoning					X			
Use of multiplicity of data				X	X			X
Are specific					X			
Cannot be standardised					X			
Are descriptive, qualitative, exploratory and explanatory		X			X	X		X
Have a heuristic value					X			
Empirical enquiry								X
Multiple sources of evidence are used								X
Embedded case studies were sub units of analysis								X
Unit chosen was temporally and spatially bound			X					
Intensive examination of specific factors				X				
Particular historical development			X					
Unique configuration of being			X				X	
Bounded system							X	

**Table 2.1 Definitions of case study research**

Source: An extract from ‘Implementation of realism in case study research method’ by Christie, Rowe, Perry, Chamard (2000).

This thesis has progressed, based on an understanding and because of an interest in the ‘grounded theory’ of Strauss and Glaser (1967), to arrive at conclusions about a phenomenon, based on a set of empirical data, where the focus of the investigation was to analyse existing and contemporary situations, by using the case study research

method. Yin offered three conditions which have to be met when selecting a research strategy: (a) the type of research questions that will be posed, (b) the extent of control an investigator will have over actual behavioural events, and (c) the degree of focus on contemporary as opposed to historical events (Yin, 2003: 5). Yin stated that ‘when ‘how or why’ question is asked about a contemporary set of events and behaviors over which he/she has no control’ the case study strategy has distinct advantages (Yin, 2003: 9). Cases are evidences. The multiple case studies aid, inductively, generalisation and allows the researcher to build upon theory through the process of pattern matching.

## **2.4 Research strategy**

The research strategy was concerned with developing an empirical grounded theory by the systematic analysis of the spatial and social data of the multiple case studies. The answer to the research question was to be constructed by using the insights gained from the social study to find the meaning behind the spatial findings. The thesis is, therefore, ‘exploratory’ in its process.

## **2.5 Research question and objectives**

### **Key question**

What are the types of relationships between the temples and retail activity in the city of Chennai?

### **Key research objectives**

- a) to investigate international religious public places
- b) to gain insights about the Chennai phenomenon from a local historic perspective
- c) to examine the spatial aspects that relate the temples of Chennai today to the adjoining retail activity in the city, using Space Syntax; and
- d) to explore the social aspects that relate the temples of Chennai today to the adjoining retail activity in the city.





**Figure 2.4 Research structure**

The research structure (see Figure 2.4, above) is directly linked to the key research objectives mentioned in Table 2.2 below. The investigation is in two parts, namely, a literature review and an empirical study. Whilst objectives a) and b) are addressed through literature reviews (see Section 2.6), objectives c) and d) are addressed via empirical research (see Section 2.7), using spatial and social investigations (see Table 2.2). The research concludes by crystallising the various types of relationship between the temple and its adjoining retail activity by a cross-comparison of the findings from both the literature review and the empirical works.

**Table 2.2 Objectives, chapters and method**

Objective	Chapter	Method of study
To investigate the international religious public places	Chapter 3	Literature review to consider the spatial and social aspects of international examples in terms of the relationship between religious and retail activity.
To gain insights from the local historic perspective	Chapter 4	Literature review to study the spatial and social aspects of the Tamil landscape in terms of the relationship between the Hindu temple and retail activity.
To examine the spatial aspects	Chapter 5	Empirical study to examine the spatial context that relates the temples today to the adjoining retail activity in the city.
To explore the social aspects	Chapter 6	Empirical study to explore the social context that relates the temples today to the adjoining retail activity in the city.

## **2.6 Literature review**

The theoretical study or the literature review consists of two strands: international and local and was undertaken prior to the empirical work. The literature review of international cities provides general insights into the social and spatial aspects that associate retail activity with religious public places. The review about the history of Chennai covers the pre-British to post-Independence eras. In India, there is no particular model of city organisation as existed in classical Greece, medieval towns or as exists in western cities such as Paris or Edinburgh. The Indian cityscape today has developed from layering and accretions over time (Nanda, 1991: 1). In that context, gaining an historical perspective has also been central to this study and this has been achieved by examining the extensive literature written by many Eastern and Western scholars. The anthropological and sociological literature on south Indian history offers specific insights into south Indian temples, their history and their associated retail activity. The knowledge the author gained from the literature was used to progress the process of the empirical study, from which, she made cross comparisons in the research-conclusion (Chapter 7) to present an overview of all the salient issues, in the context of Chennai city.

### **2.6.1 International study**

The international study (Chapter 3) presents a literature review of the relationship between religious public places and their juxtaposed retail/commercial activity in Middle Eastern and European contexts. The review had two objectives, namely: a) to find the significant aspects of a public place that promotes retail activity throughout history and b) to find contemporary or westernised patterns of retail topography to understand the contemporary context of those historic public places. The historic study focused on Middle Eastern and European urban contexts with regard to their respective key places of worship. The contemporary study understood the complexity of today's public spaces in relation to the significance of retail topography to them and established the relationship of those historic-public-place locations to retail activity. The findings are compared with the city of Chennai in the research conclusion.



### **2.6.2 Local historical study**

The historical study (Chapter 4) traces the historic developments of the south Indian temple in relation to economic activity. The objectives of the study are: a) to understand the cultural roles of the temple at various key periods in the city's history b) to establish the social and spatial aspects that emerged from those roles and c) to discuss the spatial and social aspects that related the temple to its juxtaposed land use in the city's key developmental periods. The importance of the temples in south Indian history has been studied and acknowledged already by many scholars. This chapter presents existing literature and focuses on the historic development of the temple-retail paradigm in the three important historic phases of the city, namely, in the pre-British, British and post-Independence periods. The change of the temple's role under the colonial rule remains the main interest of this period. The author's literature review of post-Independence and contemporary periods examined generally, the temple's situation as an evolving process from one period to the next; whilst she presents a detailed evaluation of her empirical studies in Chapters 5 and 6 and her overall conclusions in Chapter 7.

## **2.7 Empirical research**

The empirical works focus on contemporary Chennai and includes spatial and social studies, with specific research techniques adapted to each. The empirical part uses quantitative research techniques, as will be explained below, which follows the initial or 'natural history' (Silverman, 2000), the background of the investigation. Key questions that arose at the outset of the empirical study included: were there characteristics which would relate the temple to retail activity and, if so, what were they and how did they function? The empirical study, undertaken in Chennai, the case-study city, is in two parts, namely, spatial and social. While Chennai city can be described as a single unit of analysis, the 36 case-study-temple locations can be described as multiple units of analysis. The empirical research objectives determined the choice of study techniques and each technique's limitation was compensated for by input from the other, therefore, given that the techniques complement each other, the empirical study had a 'mixed methodology' (Bonyton, 2004). The spatial study was intended to present a picture of the physical context and the social study was

intended to find the meaning behind the physical context. In the spatial investigation, the urban structure and its land use were studied by using Space Syntax; and in the social study, the temple's role, and the everyday social patterns relating the temple and retail activity, were investigated.

### **2.7.1 Data collection**

The data has multiple sources, namely, archival and the documentation of on-site physical data. The empirical data can be grouped into two categories, spatial and social, and they have multiple evidentiary sources. The spatial data has two sources: one from a government authority (land use plan) and one prepared by the author (the Space Syntax map). The social data also has two sources; one from the Temple Directory of Madras City, Part II, 1967 (the temple's role) and one provided by the author (a questionnaire survey). Apart from these sources, Eicher's (2003) Chennai City Map and the INTACH guide, Madras. The Architectural Heritage by Kalpana (2003), provided mostly useful landmark information. The empirical data was a 'precise set of numerical information produced by the techniques' (Neuman, 2003: 171) and, therefore, was conducive to statistical analysis. By doing so, this thesis has developed two database sets, namely, spatial and social contexts, for the case study temples of Chennai.

'Data analysis consists of examining, categorizing, tabulating, or otherwise recombining the evidence to address the initial propositions of a study' (Yin, 1994 in Tellies, 1997: <http://www.nova.edu/ssss/QR/QR3-2/tellis1.html>). In the analysis of the spatial data, four levels of analysis were carried out to identify patterns within the data. The first two levels consisted of the analysis of individual cases, and the grouping of cases with similar patterns; the third level was a summation of all cases through the attributes; and the fourth was determining typologies based on the patterns. In the social study, descriptive and associative analyses were carried out. SPSS, the statistical analyses' package for quantitative data, was used to categorise the criteria (see above), to check for 'urban patterns' (Ogrin, 1988) and to find the significance of the attributes of both the spatial and social data sets.



2.7.2 Spatial study

The aim of the spatial study (Chapter 5) is to explore the spatial characteristics that determine the relationship between temple locations and retail developments. It is important to analyse both the city and temple localities because temples are dotted all over Chennai in various spatial combinations. The study had two objectives: to analyse the **structure** of the urban street network; and to analyse what and how the urban land is **used**. A spatial analysis was undertaken of the structure and content of both city and local contexts. Space Syntax, the technique developed by Hillier *et.al* (1983) was used to analyse the structural integration of the urban street network; and the land use and the figure-ground studies were used to analyse in what way and how the urban land is used (see Table 2.3). The summary combines both sets of findings from these investigations in order to underpin the spatial characteristics that relate the temple to retail activity. The summary also presents the five spatial typologies that illustrate the various spatial characteristics that are likely to relate the temple to retail activity. SPSS software was used throughout the investigation. Appendix 2.2 – 2.4 describe and illustrate the details of each temple.

Table 2.3 The tools used for the spatial study			
Objectives	Tools used	Level of study	Measures
To analyse the structure	Space Syntax (Hillier, <i>et.al.</i> )	City and district	1) Global and 2) local integration of the urban street configuration
	Figure-ground study	District	1) Streets and temple tanks as open spaces
To analyse the content.	Land use study	City and district	1) Land use (city and local). 2) Function of the temple streets. 3) Location of temple on the street. 4) Local landmarks.

Two definitions are central to this thesis, that of the city and location. The ‘city’ is a boundary for a particular set of contexts and ‘location’ is a relative aspect, holding certain spatial and social contexts of the city. By choosing the case studies from various locations of the same city, Chennai, the author felt that that would provide a better understanding of the city, however, understanding Chennai in order to understand the context of the temple-locations is also important. For a city like

Chennai, where no other public buildings dot the city landscape as frequently as do temples, the author thought that the case study method would work best, in terms of understanding the whole and parts of the city. The multiple case studies provided the research with a methodological rigour which allowed the author to see patterns and to suggest theories.

The temple-locations have varied scales or degrees of commercialization; ranging from commercial land use at the city level to few shops in the location. The question of 'why here and why not there' further appropriated the choice of case study method. In order to establish general relationships from multiple case studies, 36 temple locations were chosen for the study. According to Yin, while choosing multiple case studies, the necessary logic involves selecting the cases carefully so that 'they will produce contrasting results but for predictable reasons' (Yin, 2003: 47). The Chennai temples have different historical backgrounds, varying scales of retail activity, are in different locations in the city but all are within the city limits of Chennai city. The only similarity amongst all the case-study temples is that they all have temple tanks.

Yin (2003: 21) proposed that there were five components in a case study research. These are: as an overall study question, its proposition, its unit of analysis, logic of linking the data to the proposition, and the criteria for interpreting the findings. This thesis' research question and the study's propositions are described above; the other components of the study can be listed as follows:

The temples with tanks (unit of analysis) all over Chennai were chosen as case studies. The case study analysis led to 'pattern matching' (logical linking), in which the attributes of the case studies were assessed for their value in relating the temple to the surrounding retail activity (proposition). The attributes were measured through three research techniques, namely, Space Syntax, land use and figure-ground studies and were assessed for high, medium and low scales of retail activity (criteria) and the measurements were conducive to statistical analysis.

### **2.7.3 Social study**

The social study (Chapter 6) explores the social process that relates the temple to retail activity. This is undertaken by analysing the temple and Chennai society with



the following objectives: 1) to discover the social role of the temple in the contemporary city context; and 2) to find the possible socio-cultural, socio-economic and socio-spatial aspects which relate a temple to retail activity. Chapter 3 showed that the temple is a place of worship and still attracts a large number of worshippers. The social aspects of the case-study temples were studied from the extant statistical evidence about the historic, administrative and sects' values. The three temples, Sri Kapaleeswarar Temple at Mylapore (Temple 10), Sri Marundeeswar Temple at Thiruvannamur (Temple 1) and Sri Thyagarayaswamy Temple at Thiruvettriur (Temple 36) were noted for their historical importance in Chapter 3. The research in Chapter 6, will show that these three temples continue to be remarkable social attractors and event spaces in Chennai. In order to establish historical continuity in the social role of the temples and to find the possible social relationships that a temple has with surrounding retail activity, a questionnaire survey was carried out at the three temple locations. The questionnaire was designed to discover the activities, perceptions and physical aspects that relate the temple to retail activity around the temple. The questionnaire data was tested to determine descriptive and associative social patterns by using SPSS. The findings are summarised in the conclusion which gives an overall understanding of the social context.

### **Questionnaire design**

The aim of the questionnaire was to establish the link in user patterns between the temple and retail activity. The objectives were to study the role of the temple in contemporary culture and to find people's activities in and perceptions about the given physical settings. Questions were asked in relation to activities, perceptions and physical settings of the temple, the shops and the location. The questionnaire (Appendix 3.4, page 288) had three parts. Part A asked questions about the respondents' visit to the location. Part B was divided into three sub-parts that covered the temple, commerce and the location and Part C presented questions requesting factual data about the respondents.

The questionnaire consisted of succinct and closed questions which were mostly based on the understanding gained from the initial study. Open text boxes were added when needed and at the end of the questionnaire, to encourage explanations from respondents. The answers to the closed questions could be chosen either via Likert

scales or multiple choice. Whilst the attitudinal questions in Part B were designed to receive scaled responses, questions in Parts A and C about basic and factual information were intended to prompt precise responses. The former type had statements to establish ‘scaled responses’ (Gillham, 2000: 31), referring to the 5-point Likert scale. The scale varies from 1-Strongly Agree, 2-Agree, 3- Undecided, 4-Disagree and 5-Strongly Disagree. Part A and C had multiple choices below the questions to elicit ‘selected responses’ (Gillham, 2000: 28).

**Sampling**

An analysis of the 2001 Census statistics indicated the demographic pattern of the city, which was helpful in the sample survey. Before the sampling process for the questionnaire was undertaken, the 2001 Census demographic statistics of the city were studied to gain an understanding of existing age distribution patterns. Since the questionnaire was designed to be asked of adults, a statistical study of demography from the age group ‘10-19’ and above was made (see Table 2.4). Table 2.4 shows that the modal adult age group is

“20-39”, which is 44.9% of the total adult population of the city. The 2001 Census showed that the city’s population has an almost equal distribution of men and women (men 51.1%, women 48.9%). The author decided that when choosing the samples for the questionnaire survey, the age and gender distribution of the respondents would be representative of the 2001 Census statistics.

Table 2.4 Census data on age distribution (Source: Census 2001)	
Age group	The 2001 Census population
10-19	N=791860, (22.2%)
20-39	N=1609194, (44.9%)
40-59	N=830121, (23.2%)
60 and above	N=350826, (9.8%)
Total	N=3582001, (100%)

**The survey**

102 respondents were interviewed at the commercial streets adjacent to the three of case-study temples and their tanks, namely, Sri Kapaleeswarar Temple (Temple No.12) at Mylapore (Central Chennai), Sri Marundeeswarar Temple (Temple No.1) at Thiruvanmyur (Southern Chennai) and Sri Thyagaraswamy Temple (Temple no. 41) at Thiruvetriyur (Northern Chennai). The author conducted on-street interviews with each of the respondents who were chosen according to 2001 Census distribution (see



Table 6.4) All these interviews were conducted in the working day/ evenings in order to find the social patterns that related to people's everyday life, thus avoiding any particular festival or annual event. The data from the questionnaire survey was analysed through SPSS software to find the significant social patterns.

## Conclusion

The author's approach to the analysis of the spatial and social contexts was found to be valid: a) through initial discussions with Chennai residents and site observations in the city; b) by studying the religious practices, given that the major focus of the research was the Hindu temple c) the research investigates public places (the temples) and spaces (the temple-streets) of the urban landscape. The three landscape components of the research are: the temple, the shop and the street as a transition space between the temple and the shop. The central focus of the thesis is the commercialisation of the urban locations of the religious public places in an urban context, more specifically, the Hindu temples in the city of Chennai. The research strategy involved analysing the spatial and social context of the temples, aided by a case-study research methodology.

The thesis used a 'mixed methodology'; the author began the investigation by simply speaking to the people of Chennai about the relevance and value of the phenomenon of the temple and its associated retail activity. The investigative method used quantitative research techniques to assess both the spatial and social aspects that related the temple to retail activity in Chennai. A variety of techniques were used even within the quantitative analysis, namely Space Syntax and a questionnaire to determine the sub-objectives of the spatial and social sides of the investigation, respectively. The case study strategy also aided triangulation by having multiple cases selected through the replication of the qualities, for example scales of commercialisation.

The structure of the thesis is as follows. The literature review is presented in two chapters and comprises an international case study (Chapter 3) and an historical perspective of Chennai city (Chapter 4). The empirical studies are presented in two chapters, giving insights into the spatial (Chapter 5) and social (Chapter 6) contexts.

The conclusion (Chapter 7) attempts to propose an answer to the research question and the objectives and suggests recommendations, by examining the findings from the empirical studies and the literature reviews. The appendices, from 2\_1 to 3\_4, are the case-study database.



## Chapter 3

### International religious public places

A literature review was undertaken about international religious public places in order to: a) learn about the aspects of commercialisation associated with religious public places; b) find out how commercialisation has pervaded a city's land use; and c) find analytical methods that could support the empirical study. The literature review studied Middle Eastern mosques and Western churches during the medieval period to discover the significance of public space usage then.

Early civilisations, like the Greeks and Romans, had retail activity at those spatial locations where major social gatherings occurred. The urban spaces of the agora and fora exemplify this. The agora of ancient Greece was the centre of civic life and a market place. Socially, it was a place where the cultural, political and economic spheres merged; it was a node for social integration. This place had a cluster of temples and secular public buildings, like public meeting places and courts, all interconnected by decorated porticoes with a surrounding central open space. It changed gradually into a market place and eventually became solely commercial. The larger the city, the greater the number of agora and the main agora was located at the heart of the town, around which the residential units were organised. The Roman urban landscape suggests that urban locations closer to the public spaces were the places of retail topography, for example, the *tabernae* (Mahon, 2006: 297). *Tabernae*, then, were an integral part of the forum, the public place, where most people gathered. The commercial aspect of the forum was probably most obvious during market days when the forum courtyard was filled with temporary stalls. Some of the shop (*tabernae*) units within the forum appear to have engaged in specialist trades (Mahon, 2006: 300). Of various Roman public places, the fora highly attracted retail activity in and around it mainly because of its multi-functionality. The focus of the city was the forum, the chief place of public assembly, not only for business and political discussion, but also for such entertainments and spectacles as were provided (Cruikshank, 1999: 238). In both of these cases, public-gathering spaces were crucial to the political, recreational and religious aspects of the settlements. The major driving force in these cases was the polity or the state and religious and retail activity were two of the many other social aspects that were included physically within the boundaries of the one urban space.

The medieval period, was the golden period of religion when it played a key part in people's everyday life. Abu-Lughod (1987) takes a particular position amongst urban scholars for emphasising the 'similarity between the Islamic and European cities' that had a central dominant religious place with a marketplace (Stewart, 2001:176 and Celik, 1999: 375).

### **3.1 Historic religious public places**

#### **Middle Eastern mosques and European cathedrals in the medieval period**

##### **3.1.1 Middle Eastern mosques**

Many scholarly works on Islamic cities note that 'Islam is an urban religion', i.e., one that causes people to congregate in cities and one that shapes the urban form where it predominates. The Islamic city model (Stewart, 2001: 176), had at its core, two urban elements, a mosque and a nearby market; with a third element - possibly a public bath for the functional significance of allowing believers to prepare for Friday prayer. The Friday mosque or the Jami-Masjid had its allied buildings of institutional public places like schools and libraries, thereby creating the public sphere of the city. On the periphery of this core, the presence of city walls and the existence of irregular street patterns and ethnic segregation in residential units were also associated with this model (Stewart, 2001: 176). This spatial model was neither just physical nor accidental and each of the spatial elements allowed definite social connections to be made. The use and form of the private house quarter corresponds to the way larger settlement is used (Rapoport, 1977: 306). This model is rather a religious requirement that 'only in a city, with its Friday mosque, its markets and, possibly, its public baths, can the duties of the religion be fully performed' (Grunebaum's work as noted in Abu-lughod, 1987: 157).

The market quarter provided services to the mosques and its allied buildings. Abu-Lughod (1987: 156&7) translates Marqais's "L'urbanisme musulman" as follows:

"I have said that the centre was occupied by the Great Mosque, the old political centre, the religious and intellectual centre of the city, where the courses were given to students from the various schools. Near the mosque, the religious centre, we find the furnishers of sacred items, the *sug* of the candle sellers, the merchants of incense and other perfumes. Near the mosque, the intellectual centre, we find also the bookstores, the bookbinders and, near the latter, the *sug* of the merchants of leather and the slipper [babouchel-makers



which also use leather. This introduces us to the clothing industries and the commerce in cloth, which occupy so large a place in the life of Islamic cities. The essential organ is a great market, a group of markets that carry the mysterious name, *Qaiqariya*. The *Qaiqariya* . . . [is] a secure place encircled by walls where foreign merchants, above all Christians, come to display their cloth materials brought from all European countries. The *Qaiqariya*, placed not far from the Great Mosque, as in Fez or *Marrakesh*, for example, is a vital centre of economic activity in the city. Beyond the commerce of textiles, of the jewellers, the makers of hats [chechias], we find the makers of furniture and of kitchen utensils. . . . Farther out are the blacksmiths. Approaching the gates one finds places for caravans . . . then the sellers of provisions brought in from the countryside. . . . In the quarters of the periphery were the dyers, the tanners, and, almost outside the city, the potters.”

It is interesting to note the location of commodities significantly related to that of mosques both spatially and socially; the space or an urban entity or a quarter demanded particular or pre-determined social activity and the shops located in the same entity therefore facilitated these activities through their commodities.

### **Damascus**

In the Middle East during the Ottoman period (15<sup>th</sup> and 16<sup>th</sup> centuries), there was a strong connection between the shops and mosque, in that the shops raised the funds for the upkeep of the mosques and their allied buildings. The Islamic urban pattern has two types of mosques, namely, *Kulliye* and neighbourhood mosques. *Kulliye* mosques were the principle ones and were located at the heart of the city, while the neighbourhood mosques were in the residential quarters. The Great Mosque of Damascus (see Figure 3.1), one of the three important mosques of Islam, was built between AD 705 and 715 in the capital of the Umayyads, the first Islamic dynasty. Almansouri's PhD work (1991) found that the role of this Friday mosque, was physical, social and cultural and that it had a significant relationship with the other urban elements of the city. His work explains that the centres of Islamic neighbourhoods had mosques with commercial and public welfare services and the outskirts were the residential quarters; and that the *Kulliye* holds the central mosque with surrounding service units, like schools, public libraries, baths, hospitals and economic activities.



**Figure 3.1 Umayyad mosque of Damascus**

Spatially, the early *Kulliye* were not developed as part of a master plan but rather, they followed the sites' topography. The physical role of the *Kulliye* become more formal and culturally more responsive and became a principle characteristic of Islamic cities. Physically, unity and harmony was achieved by:

- A single, modular form – the dome-cube module of varied sizes, as needed.
- Buildings were organised around the main axis of the *Kulliye*
- The scale of the surroundings was broken down in order to attain, carefully, a human scale
- The use of same materials.

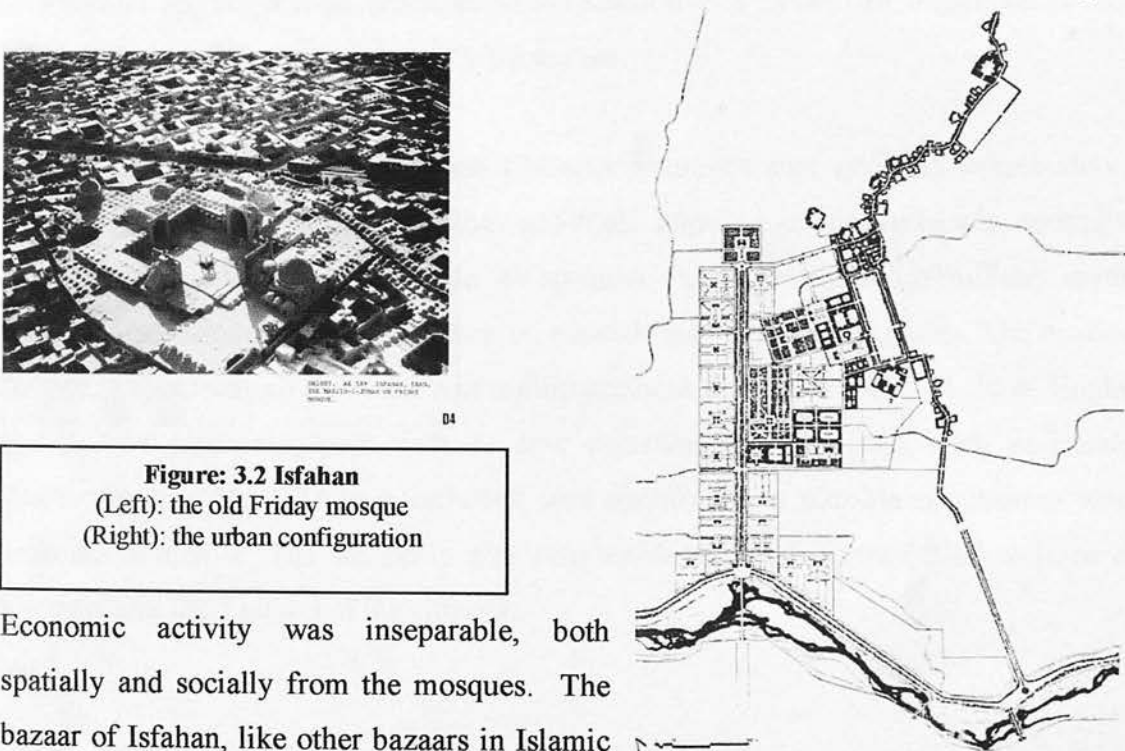
Almansouri (1991) mentions that the closer people were located to a mosque, the stronger their relationship was to it and with each other, which led to a culturally unified city. *Kulliye* provided services to the inhabitants as well as contributed to civic unity as the centre of daily life. As a social space, *Kulliye* offered space for festivals, discussions, meetings and processions with spatial qualities of arcades, colonnades, thoroughfares and squares. Culturally, this was a place for education and social welfare that included providing free meals for the neighbourhood poor and the students of *Kulliye*. Economic activity emerged during the process of construction and after completion, since these groups of buildings offered employment to the inhabitants. The *Kulliye* were developed as *Al-Waqf* or endowment, and had economic activities, like *Bedestens* or covered markets for valuable goods which produced a maximum income, enabling *Al-Waqf* to run and maintain the *Kulliye*, such as welfare services. Almonsouri's (2003) study concludes



that *Al-Jami* (Friday mosque) was able to unify early Islamic cities in terms of their physical, social, cultural and economic aspects.

**Isfahan**

The peculiarity of Isfahan is the presence of two magnificent mosques in almost the same central-quarter of the city. Isfahan became the capital of Iran in AD 1587 and the city grew over the centuries. Before AD 1504, the Friday mosque or the Jamie Mosque had its government quarter, Maidan-e-Kohneh. In the early 16<sup>th</sup> century, the Maidan was ‘moved’ from this location and by 17<sup>th</sup> century, a new Maidan-I-Shah was built with the aim of introducing grand-scale planning (Herdag, 1990). The new mosque was used for Friday prayer. The main bazaar street connected these two mosques (see Figure 3.2). After the ‘move’ the old Maidan gradually was converted to commercial and residential land uses. Firstly, the old structures were in poor physical condition. In the Ghadjar Period there was a recession and deterioration in the city. Later, due to the political and economic deterioration of the city, the space was divided into smaller plots for use by people who wanted to take advantage of the situation.



**Figure: 3.2 Isfahan**  
(Left): the old Friday mosque  
(Right): the urban configuration

Economic activity was inseparable, both spatially and socially from the mosques. The bazaar of Isfahan, like other bazaars in Islamic cities, had three parts: a) the main and peripheral streets and corridors inside the bazaar, b) economic complexes with stores and places for housing merchants and c) economic complexes without any residential possibilities (Gharipour, 2003:

[http://www.iranchamber.com/architecture/bazaar\\_of\\_isfahan1.php](http://www.iranchamber.com/architecture/bazaar_of_isfahan1.php)). The shops were located mostly by reference to the mosque and were laid out according to the security demanded by the merchants, for example, the gold merchants were situated strategically, close to the new Friday mosque and the grocery shops in more far-off areas. Apart from these two mosques, Isfahan also had neighbourhood mosques and bazaars, which served as local public gathering centres, allowing people to participate in social activities such as religious festivals and in making decisions about the quarter.

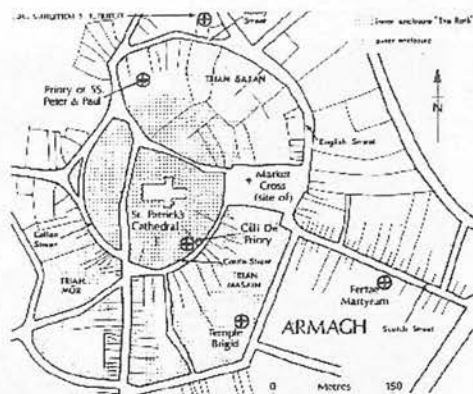
### **3.1.2 European cathedrals**

Abu-lughod (1987, p.156) notes ‘... it suggests that Islam shares with Judaism and Christianity the same quality of urbanity’ that is, the mosque was on a par with the church as ‘things essentially urban’. She also mentions that ‘when the church was also the temporal power, medieval European cities were also defined by the presence of the cathedral and the marketplace in front of it’. In Islamic cities, the Friday mosque dominant mosque in a city; it was akin to a Christian cathedral dominating the local churches. Both religious spaces operate systematic endeavours; a Friday mosque is valid as a central congregational space and the cathedral is a system of organisation and a social network – bishops, local saints and monks.

Broadbent (1990: 15) writes that the Christian churches kept civilised values alive in Europe during the ‘Dark Ages’. The cathedrals imposed on peasants, via centralised control, codes of living, for example, on spiritual, fiscal, territorial and military matters and it disseminated knowledge on secular, educational and religious topics. The medieval cathedral, then, was all-powerful and multifunctional. Eventually, the whole of England was divided into sees, each with its own cathedral and bishopric, such as London, Winchester and York. Once a cathedral was established, a sizeable community would grow up around it. The bishopric was responsible for both the spiritual welfare and financial and legal affairs of the citizens.



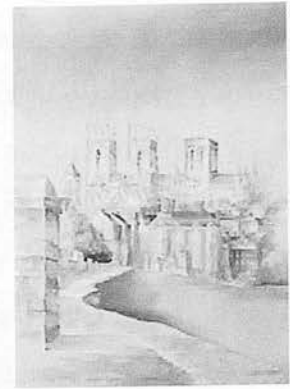
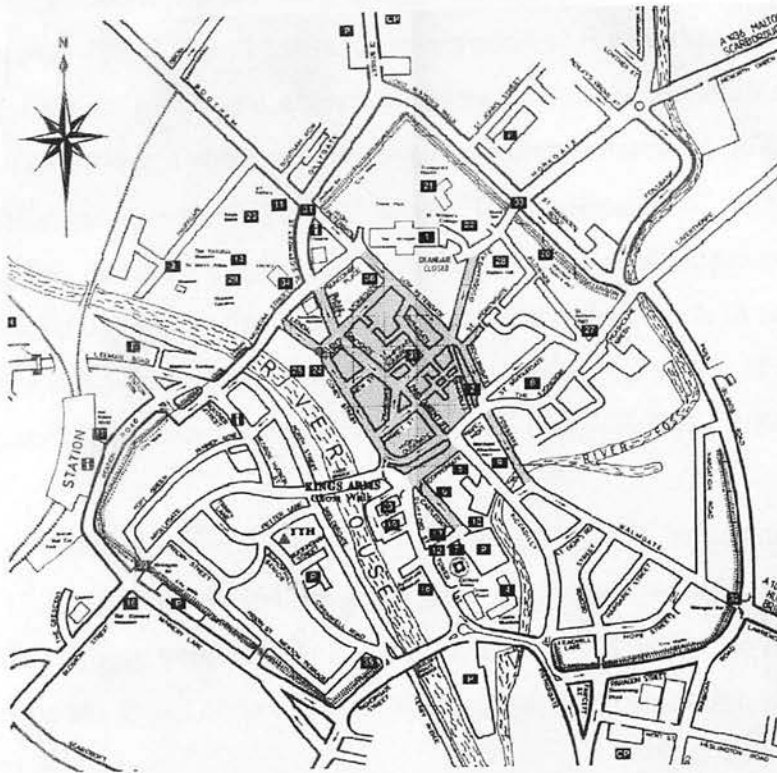
In the early medieval period (10<sup>th</sup> to 12<sup>th</sup> centuries), the validity of the cathedral was physically reflected in an urban landscape. Armagh (10<sup>th</sup> century), an Irish city, (see Figure 3.3) had a centrally located St. Patrick's cathedral and a market, around which were housing quarters, probably for students, craftsmen and functionaries. In York, before the fire in 1086, the centrally located library was serving three roles as Minster and market (Esher, 1964). In the English city of Ludlow, (1186) the market was located on the eastern side of the church itself.



**Figure 3.3 Armagh (10<sup>th</sup> century), an Irish town**

In the later Middle Ages, the distinction between the temporal and spiritual found new expression in the public spaces of cities, where secular and spiritual spaces were separated. This influenced the creation of two centres in the urban landscape, namely, the cathedral square and the market square. In Britain in the late medieval period (12<sup>th</sup> to 14<sup>th</sup> centuries), trade was the major influence in shaping the newly growing towns. Everywhere, towns grew outwards from their market squares, from a road junction or from a swelling in the street (Platt, 1990). The streets and squares, which were fronted by churches and markets, became natural meeting grounds for the populace. The majority of the English medieval towns were composite in nature, consisting of a number of discrete planned units, which reflect particular historical contexts.

During the first millennium AD, the city of York, England grew to be one of the foremost towns of northwest Europe. It was initially a Roman city founded in AD 71 on the confluence of the rivers Ouse and Foss. Around the 9th century, it was captured by a Viking Great Army (AD 866). For nearly 2000 years, York has been the capital of the north, and played a central role in British history under the Romans, Saxons and Vikings.

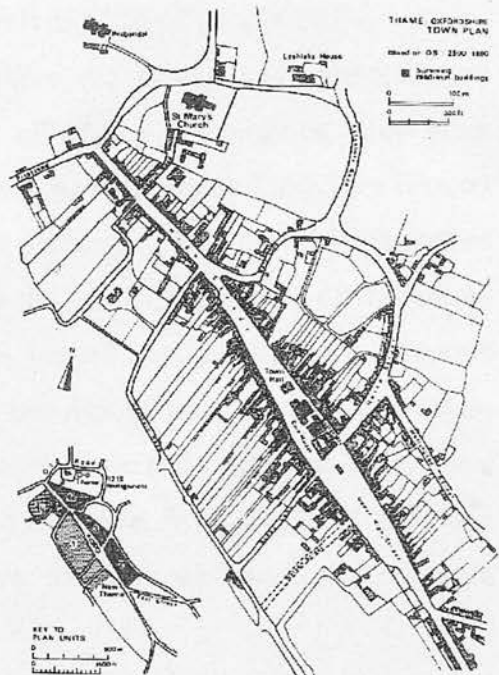


**Figure:3.4**  
**(Left): York Town**  
**(Right): A view of**  
**York Minster**

During the late medieval period (13<sup>th</sup> to 16<sup>th</sup> centuries), a prevailing pattern of the European cities was the ‘high street’, connecting the cathedral and castle, acting as the town’s commercial spine. In York (14<sup>th</sup> and 15<sup>th</sup> centuries), the connecting streets between the Minster, the largest cathedral of the West (Esher, 1964), and the castle was the location of the market place. Similarly, in Dublin, Ireland (1204) and Thame, a town in Oxfordshire (13<sup>th</sup> to 15<sup>th</sup> centuries) they exemplify this pattern (see Figures 3.4 and 3.5).

There were many other spatial combinations of church and market places that can be found during this time: a) the grouped squares that had both the cathedral and the market squares close to each other, e.g., the market and cathedral squares

of Rostock, northern Germany and b) the centrally-located market squares, which obtained more social



**Figure 3.5 13<sup>th</sup> century Thame, an**  
**English town**



importance, a parish church or any other public building would be built on the side of the market square, e.g., Eastern Germany; and c) the market square built close to the *parvis*, the square before the church building, but never accessible from the church yard but which gave the pleasure of seeing the church articulated from the market square, e.g., the cathedral squares of Wells, England. The importance of the church location, with respect to the central open space, continued up to the industrial period; for example, although the laws did not state the exact location of the main church in relation to the plaza, in many smaller towns in Puerto Rico, the church is located at one of the narrow ends of the plaza and can be viewed down the length of the plaza (Forsyth, 2002: 66).

In summary, there were two types of spatial association between the medieval cathedral/churches and the markets; a) a cathedral or church with a market located close to it, with or without their squares, this pattern is mostly an early medieval one and b) the cathedral at one end of the commercial spine of the trading towns, mostly a late medieval pattern.

### **Summary of the historic study**

The historic study suggests that religious and retail activities related to each other both spatially and socially. In medieval times, the religious spaces were the places of sociability; and the religion was powerful in the everyday life of people through socio-economic, institutional and recreational means. Spatially, the mosque and cathedral were located at the core of the city, along with their allied public buildings, they were functionally connected with each other, socially and systematically and this core formed the public sphere or the public space of the whole settlement, i.e., the city. Therefore religious places were valid social attractors in and the spatial organisers of the whole urban quarter; and retail as basic service provision, helped the functional operation of these public buildings and served socio-economic benefits to both the common-urban dweller and the shop-owners. The patterns of spatial association between them were numerous, and prototypical as an urban phenomenon and were, from the outset, an urban concept. In Islam, it was a single dominant pattern whilst in Christianity, there were many.

The lessons from these two historic religious spaces are that a) socially valid urban spaces were the enclaves of retail activity; b) these socially valid urban spaces occupied the prime location of a settlement, in other words, they were spatially valid as well; c) these

spaces were multifunctional in use and d) such retail activity connected to the people in terms of speciality skills and basic services.

Quintessentially, these religious spaces offered places of sociability at the core of the city and hence, they enlivened the multifunctional and public spaces of the city. Public space was deployed successfully for retail purposes. Retail activity was the expression of a cultural imperative. The central binding social aspect was 'religion', both socially and spatially.

What is the religion of a contemporary city? The study of contemporary social and spatial aspects comprises the next part of the research in order to understand the change or continuity of this historical and socially valid urban spatial phenomenon.

## **3.2 Contemporary contexts of public spaces and retail topography**

### **3.2.1 Public spaces**

Today, the places of sociability are in two major categories, namely, places of business competition (Madanipour, 2003) and urban open spaces (Gehl, 2004). They are both often located close to each other with no single socio-religious binding. Contemporary society is rather multicultural because of many social forces. A city's inhabitants belong to many religions and/or no-religion. What possible force could bind the multifunctional and lively urban space together?

Madanipour (2003) explains that 'throughout history, public spaces have always played a central role in the social life of cities; but they have lost their significance and are no longer the main nodes of all social networks'. Madanipour adds that 'in these fragmented, multi-racial societies, there cannot be one single building that could serve all the needs of the society'. Lees (1994: 463) explains that the diversity of public spaces is due to long-distant migration and the heterogeneous cultural identities of urban society and he mentions that the monuments and sacred places of the past do not always harmonise with the many identities of the present. Lees concludes that 'rather than proclaiming the death of public space, we would be better employed in efforts to preserve its multi-functionality and its appeal to the widest possible groups of citizens'.



Sieverts (2003: 22) states that the loss of 'urban-ness' goes hand-in-hand with the liberalisation of narrow, constricting social control and with the gaining of greater individual areas of freedom and development. The liberation from the old historical constraints has so far led to a continuing spatial dilution of social activity. This is why, he argues, 'the social significance of public space as a meeting space for people has declined so much in our time'. Other than political meeting places, he mentions that all the activities that were earlier located in public space have emigrated to large and comfortable residences and workplaces; to social institutions; to specialised institutions such as clubs and leisure facilities and to shops and department stores. Contemporary cities exemplify the current transformation from production-oriented industrial cities, to leisure and commerce-oriented, post-industrial ones.

The places of economic activity offer social networks. Other than through family and friends, Moser *et al.* (2002: 133) concludes that the social networks derive from recent relationships, which mostly are influenced by residents' spatial locations. For a city dweller these recent relationships come from the workplace, societies and clubs, and neighborhood relations and in the suburbs, nearly half of the relationships originated in the workplace, clubs and societies and the vicinity. Suburbanites therefore, had a relatively recent network, resulting essentially from local activities. Moser concludes that satisfaction depends mainly on effective and perceived interpersonal relations within the neighbourhood and on environmental opportunities, and the location and availability of facilities in the neighbourhood. Clearly, the spatial boundaries, like urban, suburban, neighbourhood and country, offer social identity and a sense of belonging (Hummon, 1986: 19). Space itself offers a means of sociability and identity.

Urban public open spaces, like streets and squares, have become the dominant places for social gathering, where the chance for sociability is higher and more varied. Krier (1979: 15) defines 'urban space' as 'space between buildings in towns and other localities'. The functions of such urban spaces are diverse. Apart from the ceremonies, demonstrations and public rituals which are mostly part of civic life, urban space offers space for the activities of everyday life, for example, traveling to work, shopping, selling goods, recreation, leisure activities, sporting events, etc. In this context, many scholarly works have been undertaken to analyse the behavioural patterns of people on the streets and in public open spaces. Madanipour (2004) emphasises the social diversity in language and

attitudes and stresses the importance of the requirement of a public space that would 'allow this social diversity to become aware of itself through free expression' and shows that it could be a social asset in the European context. Madanipour (2004: 284) mentions two kinds of public spaces; one, the central or primary public space, which constitutes the image of the city; and the marginal or secondary public spaces that occur in parts of the city and which face conflict in their use and development. The latter type, Madanipour mentions, is in need of being improved in terms of access, to exist along with public services like shops and banks to enliven and promote the success of the public space and through public events and festivals.

Ottensmann (1978: 10), while mentioning social behaviour in urban space, discusses street life as: 'in some areas, patterns of intensive social interactions that are reported to take place outside of the residents' homes on the street and in various commercial establishments in the neighborhood'. Gehl's (1987: 11) work explains the activities in such publicly accessible spaces as being of three types: a) necessary activities, which are more or less compulsory – e.g., going to school or work, b) optional activities, which are participated in if there is a wish to do so and if time and place make it possible – e.g., sitting and sun-bathing and c) social activities, which are resultant activities that are dependent on the presence of others – e.g., children at play, greetings, passive contacts. Gehl (1996: 79) explains the new street life of Copenhagen where people are mostly found in transit, shopping and window shopping. Golicknik's (2005) work categorises the patterns of use in public open spaces, such as continuously present, temporarily present and in transit and hence describes the ways of involvement, such as passive, active and intermittent, respectively.

Gehl (2004: 2) states that 'comparing street scenes from the turn of the previous century with present-day street scenes, an obvious change in the volume and character of public life stands out. In the bustling street scenes from around 1900 nearly all people are engaged in some type of necessary activities. Street scenes from our present-day society show a distinctly different use pattern. Much fewer people use public spaces out of necessity'. Gehl argues that people use the space not because they have to but because they want to or choose to, thereby, offering quality public spaces that otherwise might be neglected by the public. Such qualities of life, as Gehl mentions, are: 'lively, attractive and

safe cities with active streets, squares and parks with good quality for the pedestrian activities’.

On-street movement or pedestrian patterns have been widely researched by using Space Syntax. Scholars have proven that the more the street is integrated into an urban structure, globally (part of a main city – the complex level) and locally (independent from the city – at a district level), the more pedestrian movement can be observed on the street. In their work on public spaces, Hillier et al. (1983: 63) mention that ‘just as important to successful city life as are the personal relationships that occur in most cases independently of, and sometimes because of, particular juxtapositions and forms of public spaces and buildings’. This point is stressed by many scholars of Space Syntax. Batty et al., 2002 argues that the: ‘Highly managed spatial events’ in public open-space, like the Edinburgh Festival and Notting Hill Carnival seem to attract ‘small-scale spatial events’, which mostly involve the interaction between people and physical settings. Batty’s work (2003) has developed a model to monitor the behaviour of people, based on physical settings using Space Syntax, namely, locational attractors like shops and bus terminals, geometric repulsion and social attraction that mostly offer significant movement patterns of people. Therefore, the dialogue between the streets as public spaces and the buildings as public places induce or determine the behavioural patterns on streets.

An article by Kim and Penn (2004: 501) investigated the effects of the spatial configuration of the local environment on residents’ spatial cognitions of their built environment by examining the relationship between the spatial syntax of cognitive-sketch maps and the spatial syntax of the environment at Hampstead Garden Suburb in London. Their findings suggest that the ‘spatial syntax of configuration in real environments and spatial syntax of maps in spatial cognition are closely related’. This validates the point that spatial logic is not recent and not necessarily planned but historical and spontaneous, in the sense that the morphological land use and mental image of a street directly relate to the structural integration of the street to the global and local configuration of the city.

There is certainly an absence of ‘authentically created’ (Relph, 1986: 67) public space such as the *agora* or *fora*; but contemporary public spaces are the streets, squares or plazas and the public places are those of economic activities. The organisation of which mostly goes by the spatial logic itself, in other words, through the theory of relativism,



ranging from purely structural to land use, economic and environmental aspects of the urban space. Space is self-organising in use; the juxtaposition of contemporary buildings is predominantly a spatial determinism; socially speaking, space is realised in terms of its use; space aids social identity, a sense of sharing and acts as a main part of everyday life for people. It is therefore, the space that bound/binds people and places together as good as the religion did in the history.

### **3.2.2 Retail activity**

Unplanned retail development locates anywhere and is often temporal. Crawford (1999) refers to 'everyday public spaces' against normative public spaces, which produce the existing ideology in Los Angeles; these (everyday public) spaces help to overturn the status quo. Crawford argues that multiple public activities are currently transforming Los Angeles' everyday spaces and among them she mentions the garage sale and street vending for their spatial flexibility in accommodating the informal change in retail. These were referred to as 'thirdspace', a category that is neither the material space that we experience nor a representation of space. They contain multiple and constantly shifting meanings rather than clarity of function. 'Thirdspace' is instead a space of representation, a space bearing the possibility of new meanings, a space activated through social action and social imagination.

Lees mentions that 'commercial space has always been built into public space and vice versa' and that 'commercial space has served successfully as public space in many places and times' (Lees, 1994: 449). On-street movement patterns and retail activities have become key public lively activities in the contemporary western world. Also, from the vantage point of the retailer, the movement patterns on the streets have become a key driver determining likely business success, which is similar to the Roman retailer locating his shops next to the public spaces. Historically, public markets and commercial streets have long been settings for public life and these spaces have been a central focus and linked by the main connecting routes of the city. With the absence of centralised public buildings as 'target points', the movement pattern on the streets is determined by the potential of the space itself. Today, retail activities often tend to be located on potential urban spaces, in other words, the spatial logic of the urban configuration determines their location. The works of Hillier *et.al.* empirically prove that there are direct links between

space and movement and that there are correlations of the movement to the economic activity. Hillier argues that the space as a multifunctional one, attracts people and the spatial logic of the 'urban configuration' comprising the streets, spaces between streets and the nodes of the streets, plays a vital role in the retail topography of the city. Many works have proven empirically that spatially well-integrated urban spaces hold more movement of people and a concentration of retail or other economically viable activities. In these lines, two types of works are generally noticed; the spontaneous and the historic city-centre retail developments. For example, while studying the spontaneous retail activity in Dhaka, Hossain (1999: 34.18) suggests that the configuration of the spatial layout strongly influences the functional distribution, movement pattern and densities in spontaneous retail developments.

Contemporaneously, two types of retail spatial articulation have generally emerged: the 'commercial strip' of the urban landscape, with retail land use on the ground floor of the buildings; and shopping centres. Whilst the commercial strip is organic and has evolved gradually, the 'significant' city spaces, shopping centres, are located at various spaces in and outside the city centre. The modern retail sector is highly competitive and must search continuously for new methods, new products and new forms of development. This shift of location, initially in the 1980s, and encouraged by the British government, later met widespread concern because these out-of-centre retail parks were viewed by some as unsustainable forms of development. Policies in the 1990s tightened up on the location of retail developments such that they were to be, whenever possible, 'close to existing town and city centres'.

In summary, the economic viability and structural potential of an urban location or space, mainly an urban-street, is the primary focus for the development of contemporary retail topography. It is now essential to understand the association of public place meaning with retail activity.

Retail spaces are particularly interesting, visually, spatially and socially. The core of city life – exchanges of goods, information and ideas – still has a strong grounding in space. Serving as a public place for sociability is not new to retail shops - Gehl (1996) explains that in the relatively brief history of America, the roads and paved streets of the 17<sup>th</sup> and 18<sup>th</sup> centuries were the primary settings for public life, focused on daily commerce.

Saloons of 19<sup>th</sup> century Chicago and Boston had more functions than simply the dispensing of alcoholic beverages; they were also meeting halls, employment agencies, banks and ethnic clubs (McClymer, 1988: 410).

Moser et al. (Benoit et. al.'s work as noted in Moser et. al, 2002: 124) mentions that shopping malls in suburbs and satellite towns represent a substitute for the missing city centre. They constitute one of the rare places for social interaction, replacing the street and its traditional meeting places (e.g., cafes, small shops), places that are almost non-existent within suburban areas. For many people, the mall offers a way to alleviate boredom through entertainment, it provides convenient shopping, and is a safe, free 'public' social space to meet and interact with others (NgFan, 2003: 446); social interaction was one important motive for shopping (Ngfan, 2003: 449). Kreja (2004: 12) highlights this new type of public use of interior and privately-owned spaces of shopping centres/malls. In all these contexts there is a 'fragility' (Neilson, 2001: 9) that the public is a parasite of the private sector and is very fragile. Consumers of these malls realise that the consumption of expensive products is not a necessity but 'one of the many ways to cope with irrational desire' (Neilson, 2001: 8). Today's society centres on retail activity but in older societies, retail was an activity among many and rarely the sole or central activity.

The nature of future shopping environments is at risk of not having any physical space because of the cyber-mall culture and the emerging use of the internet, television and video games would replace shopping malls. People could get together in their homes for a 'shopping trip' and social gathering. The retailers have started to adapt their services, designs and products to meet customers' new demands. Online shopping will most likely take a minor part of sales from traditional shopping, but shopping centres will continue to succeed as they attract customers through the provision of more entertainment. They should be multifunctional. Concepts like 'epicentres' of Rem Koolhaas, which are a new kind of 'show room' that transcend the conventional ideas of place by a flexible construction that changes its function after working hours, from a store to an auditorium, are in the vanguard of understanding the values of places of sociability. The value of urban public space to give 'urban-ness' (Sieverts, 2003: 19) or on-street liveliness' (Gehl, 1996 and 2004) seemingly manifest through the combination of streets with retail shops. As mentioned by Sieverts (2003: 23): 'everyday life is put on the stage!'



### 3.3 Retail and the contemporary context of the central historic cores

Often a central dominant historic core is the contemporary city centre, which still continues to be multifunctional in use. Madanipour (1999: 7) mentions Tehran, a Middle Eastern city, where ‘the land use pattern in the old city was a functionally-defined system organized in separate quarters, with the citadel and residential areas, bazaars and mosques. Now it has changed to a mixture of uses in the city centre and predominance of single use areas on the periphery.’ Similarly, in York (see Figure 3.6), the city centre received a top-ranking in terms of the suitability of any proposal for retail activity according to British Government policy (HMSO report, Chapter 10: 1). In the amendments to the report (page 1), the city centre was intended to be ‘a mixture of leisure, retail and employment’.



**Figure 3.6 York Minster**



**Figure 3.7 Mosques of Isfahan**

Isfahan in Iran, unlike most Middle Eastern cities, has two Friday mosques- old and new, causing the former to suffer a spatial squeeze and the latter a social one. The old mosque’s bazaar is being exploited for its spatial qualities by highly dense commercial use and therefore, it has changed many of its traditional buildings to wood, and created vegetable and textile markets, while the new mosque attracts high class retail businesses (Gharipour, 2003: [http://www.iranchamber.com/architecture/bazaar\\_of\\_isfahan1.php](http://www.iranchamber.com/architecture/bazaar_of_isfahan1.php)). The total heritage scene is at loss by witnessing the division of the old Maidan by two roads and a central roundabout (see Figure 3.7 above). The plots near the old Maidan on these urban throughfares are for commercial land use while the residential land is occupied by inner enclaves of the urban land. These commercial and retail shops sell cheap goods and serve the poor. This retail activity is in fact a continuity of the bazaars of the traditional city. But what is lost is the feeling of heritage and the realisation of the

old mosque. The old Friday Mosque continues to be a symbol of tradition and history, but no longer in practice. Religious importance is clearly given to the new Friday Mosque and even to the Friday prayers happening at the new mosque. A set of new proposals according to conservation concepts is being submitted and it is hoped that if actions are taken, it could be renewed in the next five years.

The bazaar was central to the spatial structure of the city and was used as the main street in Isfahan and as a place for meeting people, seeing and being seen (Gharipour, 2003: [http://www.iranchamber.com/architecture/bazaar\\_of\\_isfahan1.php](http://www.iranchamber.com/architecture/bazaar_of_isfahan1.php)). In recent years, the business function of the main bazaar has decreased, mainly because of imported goods from western countries and the establishment of many economic complexes on the outside of the bazaar, a model which has spread to all parts of the city. Almonsouri's (2003) study thus concludes that today's planning of Islamic cities neglects giving consideration to these attributes. His study also concludes that *Al-Jami* could play a significant role in today's Islamic cities if, with the continuation of Islamic awareness which calls for stronger ties to *Al-Jami*, the services that are scattered around the city were incorporated with *Al-Jami* as nuclei for these cities. If that were to take place, Almonsouri concludes, Islamic cities would have a continuity and be more interactive, physically and socially.

European churches are subject to conservation and planning processes and therefore care is taken in adapting, reusing or conserving the old cathedrals and their urban locations. The number of 'believers' is decreasing in Britain and historic churches are facing changes to their usage from religious purposes to public libraries or social hubs. Even the grand annual festivals, such as Christmas do not seem to have any religious meaning but are marked as leisure-based activities. Historic public open spaces or buildings are now perceived, generally, as part of the 'old city' and are often described generically as 'city centres' or 'high streets'. These 'modern historic centres' (Neilson, 2001) are now the stages for the leisure life of a consumer society. The retail policy of the UK Government (paragraphh 1.1 of the PPG 6, 1996) aims 'to sustain and enhance the vitality and viability of town centres' and the retail activity located at places 'facilitating competition' and with 'easy access by choice of means of transport'. The historic or new town centres mostly have all of these three locational aspects and therefore, are highly recommended for retail development (paragraph 1.11 of the PPF 6, 1996). The UK planning policies

above believe that retail activity will bring ‘life’ to otherwise ‘dead’ city centres. York has become a prime UK tourist location and a recent proposal was to increase the number of food-retail units in the city centre.

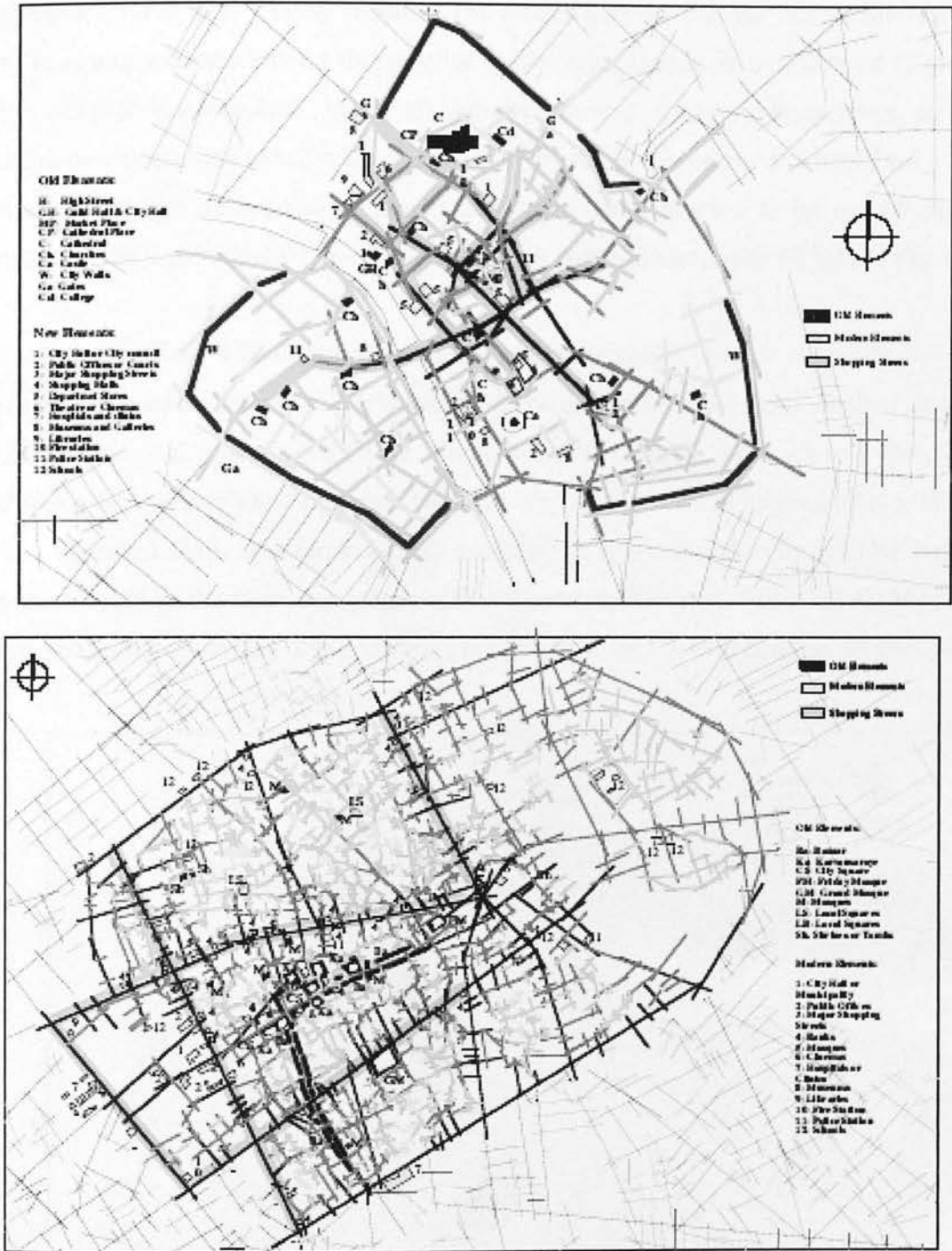
Contemporary contextual studies of these ‘old cities’, ‘city centres’ or ‘high streets’ are important to our understanding of the context of the public spaces of the past. Karimi’s work (1999) on historical English and Iranian cities had the objective of establishing a new approach to the concept of urban preservation, by investigating the fundamental principles of the spatial organisation of six English and six Iranian cities (see Table 3.1 and Figure 3.8).

<b>Table 3.1 Comparison between English and Iranian historic cities</b> (an extraction from Karimi’s work 1999)	
English historic cities	Iranian historic cities
The structure of English historic cores, which have not been subject to extreme urban transformation, appeared to be more adaptable to old and new mechanisms of life.	Cities have been modified by radical engineering solutions, that seem to be irresponsible to both modern and traditional patterns of urban interaction
English historic cores are generally successful in attracting major retail activity and people to them, who then use the area consistently.	Most of the Iranian historic centres emphasise the shift of the retail centre from the bazaar to the modern streets as an important reason for the destruction of the historic core.
The spatial configuration of the historic cores have preserved a great deal of the traditional patterns, such as a centre of integration, the distribution of integration, the differentiation between various parts of the urban system and the part-whole relationship.	The interference in the spatial structure was shown to have an outstanding effect on the total organisation of the urban system, changing the whole pattern of the local and global integration and their co-relation.
The relationship between the traditional urban elements and the spatial structure remains similar to the past. Besides, the modern elements of the historic core follow the same logic of the relationship between the spatial structure and urban elements in the old city.	Spatial transformation truncates not only the hierarchy of traditional urban elements in the historic core, but makes them considerably more secluded in the whole system. Therefore, the modern elements are built according to a new spatial logic, but the old elements and most of the urban fabric lose their logic in the urban grid.
Even under morphological changes, the overall pattern of the spatial organisation - the spatial spirit- survives.	A total loss of spatial spirit, in spite of some morphological stability.

Whilst in the English cases, these elements tend to have a similar spatial logic from the past and therefore, form a central and ‘wheel’-like growth of the city, those of the Iranian



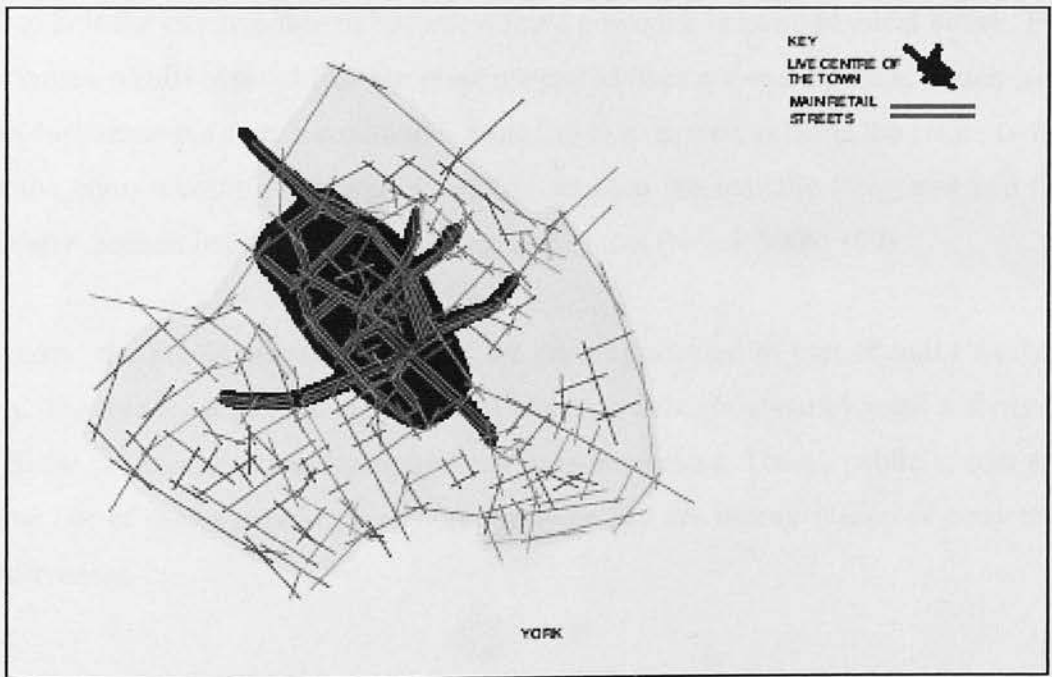
cities tend to have moved away from the historic centre and therefore, make several nuclei within the same city.



**Figure 3.8** English (York) and Iranian (Kerman) cities (above and below, respectively): location of the urban elements marked on Space Syntax graphical representation

Because of their age, the historic centres of the cities are confronted with a contradictory situation: they are usually located in the most strategic part of the city and they convey a remarkable traditional and historical urban social heritage, as well as acting as a primary expression of a society's urban identity. The analysis shows that the fate of the historic core is strongly dependent on the way its spatial organisation is transformed (Karimi, 1999: 62.13). For example, the retail activity showed a strong dependence on the integration value of the urban spaces; in English cities, the historic centre remained a still active commercial centre and in the Iranian cities, there seemed to be a shift in the location of the retail activity from the historic core, to the modern spatial logic of the city.

Contemporary York has sustained a central shopping sector, which is in between the Minster and castle sectors. Hillier's work on 'centrality as a process', studied several English traditional towns cities (York, Canterbury, Winchester, Norwich and Hereford) and found that most of them responded to a key characteristic of an internal local grid that almost takes the shape of a circle ('spiky potatoes' as it is referred to by Hillier), having the shorter side as the mean trip length within the shape (Hillier, 1999b: 06.14). The 'live centre' of York (see Figure 3.9) comprises the principal streets with continuous shopping.



**Figure 3.9 'Live centre' of York**

The overall convex and compact shape of the centre is preserved, though with rather more elongation in the north-south direction than the east-west direction. Within the live central area, all internal small-scale streets have continuous retail and a market square is also to be found there.

Nejad's (2005: 198) work classifies the pre-modern Iranian cities into two types, the first type included the commercial bazaar, where the bazaar was purely a retail cluster and it did not include other socio-cultural spaces; and the second type included those cities with a bazaar-based economy, i.e., the 'socio-commercial bazaar', which was the centre of the socio-economic activities of the cities. The Space Syntax study found that the socio-commercial bazaars generally have a linear form and was the centre of spatial configuration of the cities. The commercial bazaars were neither the centre of social activities nor the most integrated part of the city.

The Iranian city of Shiraz, throughout history has undergone various phases of development. In the 16<sup>th</sup> century, the city became one of the important cities of Iran, a large qesre, a new great mosque and the governor's palaces completed the city spine; later in the 18<sup>th</sup> century, the addition of a citadel, new great mosque and a bazaar all helped to knit the city together to become a more powerful, organic physical entity. The Space Syntax results showed that the most integrated lines are exactly those which pass through the bazaar and form a continuous route inside it, as well as being the centre of the integration core, revealing a powerful relation between the spatially integrated and the functionally, economically and cultural integrated spaces (Nejad. 2005: 189).

In summary, the public places of the past are often re-adapted as part of today's urban systems. The liveliness of these urban spaces is mostly brought about by retail activity in either linear or circular urban configurations from the centre. Today, public spaces are emerging out of the requirements of new lifestyles and are mostly places of economic competitiveness.



## Conclusion

This chapter provided an historical context, with ample evidence that the physical juxtaposition of places of worship to retail development is both a social and spatial phenomenon in Middle Eastern mosques and European cathedrals in the medieval world. The historical religious spaces now have minimal social processes in a city of a multicultural society, but are spatially squeezed because of their relatively dominant urban location. Today the physical association is mostly due to spatial relationships. Historically, this was not the case. A town or a settlement had an assigned space that allowed both socialisation and a public realm. Historically, a public space or a set of public places clustered together offered a socially valid urban space, where, often retail activity emerged.

Attractors are basically of two types: social and spatial. The social attractors cause activity based movement and spatial ones cause urban structure based movement on streets. Both are alive and kicking historically and contemporarily, in various degrees and combinations. The on-street movement of people was/is predominantly important for retail activity to emerge; this chapter showed that historically, the 'movement' had social meanings; and that contemporarily, the 'movement' is urban structure based. Historically, religious buildings with their ancillary buildings were located at the city centre, therefore they had movement relating both social and spatial aspects. Contemporarily, the socio-religious tie may not continue to be predominant for the society has become multicultural.

The retail was one of many past activities, whilst contemporarily it has become the main activity of society. The contemporary trend is that places of sociability are economic-based and are mostly spatially determined. It is important to note that today, economic activity determines the character of public space. Historically, multifunctional spaces had retail; today, retail spaces aim for multifunctional space. Retail activity was once an adjunct to the use of public space; today, the retail activity itself catalyses the liveliness in urban public open space, i.e., the streets. Future indicators suggest that multifunctional malls located on the best-integrated streets will form the key urban-social spaces of future cities. That will be a repetition of history, in terms of the everyday sociability of places

and retail activity combined at important city locations. The difference is that the meeting places of the past evolved with retail activity in or next to them; conversely, today, retail spaces are growing to include public-social spaces within them. The former was a public space explored for private use; the latter was the reverse.

Public places and spaces are a means for cultural interaction. Two aspects of public space are important to attract retail activity. Firstly, the role of public space in everyday life is crucial to decisions about its social value and therefore, to attracting the majority of people to it. The more people public space attracts, the more retail topography is associated with it. Secondly, the relative locations, with respect to their urban configuration are the key factor for commercialisation. It is vital, therefore, to study the role of public place and its location, in order to synthesise the social and spatial aspects relating a public space to retail activity. This understanding is taken forward into the research in the empirical study.

## Chapter 4

### The temple and commerce – an historic perspective

An historical study of the south Indian Hindu temples was undertaken in order to provide specific insights into the chain of association of local religious public places to retail activity. The Hindu temples of Tamil Nadu, Tondaimandalam and Madras (Chennai) were studied with the major focus being given to those of Chennai city. The review was undertaken to understand the complex and key relationship of the Hindu temple with economic transactions in the pre-British and British periods, and with retail activity today.

‘Temple urbanism’ (1000-1600 AD) (i.e. the pre-British period in south India) is a broad term used to describe the mechanisms of urban growth, i.e., the prevailing socio-religious, socio-economic and socio-political aspects in this period and their relation to the south Indian temple. That is, the temple’s long-established pivotal social as well as religious function and its spatial location and articulation, supported the flourishing of the expanding towns and their economies and trade. This ‘urbanism’ prevailed throughout the pre-British period in south India and Chennai then emerged as a ‘city’ (Madras) during the British period (1600-1947 AD).

The urbanisation and architecture of Tamil Nadu (the state of Chennai) is a by-product of its political ideologies (Srivatsan, 1994: 37). A study of the temples’ history, can be best understood in terms of the following phases: the pre-British, British and post-Independence as shown in the Table 4.1 below.

Table 4.1 The historic phases of the city		
Historic phases	Classification	Period
Phase 1	Pre-British period	AD 900 to 1600
Phase 2	British period	AD 1640 to 1947
Phase 3	Post-Independence period	1947 onwards

The author studied the district or boundary called ‘Tondaimandalam’, that is, the district’s name before it was known as ‘Madras’. It was an area in the pre-British period under the regime of local rulers. British rule not only made a significant difference to the social processes but also gave birth to Madras, later known as Chennai. The author studied the spatial extent of Tondaimandalam in the pre- and post-British periods.



## 4.1 The pre-British phase (500 BC to AD 1600)

### 4.1.1 The temple in the early Indian period (500 BC-AD 500)

During the Early Historic Period (500 BC-AD 500), the temple in northern India was a place of worship, in the centuries immediately before and after the beginning of the Christian era. By the 4<sup>th</sup> century AD, the Hindu temple had become a symbol of power and authority thanks to the dynasty of Gupta rulers, in northern and central India, who patronised Hinduism (Morrison, 1997: 89). This was the golden period of temple architecture in the north, when the institutionalisation of the temple began. The temple authorities gave land grants and therefore, made its people top priority and conferred social status on them. The temple was systematically built up as an institution, an innovative focus for social, economic and cultural activities.

Spodek's study (1980: 256) of the history of urbanisation in south India refers to the continued importance of the temples as the focus of settlements and that the temple was the organising principle of the settlement pattern, rather than just being one among many institutions. Spodek (1980: 256) mentions that urbanisation in south India especially, in the pre-colonial and pre-industrial period, must take account of the temple as a central economic, political and social institution. Hinduism, in a refined form, emerged from the *Bhakti* (meaning devotional worship) ideology, and was influential in the socio-political and the socio-economic contexts that caused what is known as the 'temple urbanism' process (1000-1600 AD). During the first part of the Middle Period (500-1200 AD), Hindu temples in south India had political and economic significance, in addition to their more evident function as ritual and scholarly centres. In the 'temple urbanism' period, this was reflected in the Tondaimandalam region of the author's study. In south India, (Hindu) *Śaivism* and *Vaiṣṇavism* largely replaced Buddhism as concepts of royal patronage (Morrison, 1997: 97).

#### 4.1.2 Temple urbanism

Though the early process of urbanisation began in south India around 300 BC (Champakalakshmi, 1996 and see Appendix 1, page 198-201), the process of temple urbanism emerged in AD 600 (the early period 7<sup>th</sup> to 10<sup>th</sup> centuries AD), reached its peak during the 10<sup>th</sup> to 13<sup>th</sup> centuries AD (the core period) continuing through the 14<sup>th</sup> to 17<sup>th</sup> centuries AD (the later period).

Temple urbanism is a distinctive feature of early (AD 600-1300) and particularly of the later medieval (AD 1300-1630) Tamil Nadu region (Chamapakalakshmi, 1996). Urbanisation was probably the most significant historical process of the period, beginning in the ninth century AD “gaining impetus by the eleventh century, flourishing from the thirteenth century onwards” (Nanda, 1996: 1). This urbanisation saw the temple as the centre of social, economic and political dominance and therefore, such dominance was expressed through the spatial planning of those urban landscapes. According to many authors, the temple of this period can be understood as the main social impetus because of three factors, namely, (a) the political domination of Chola (AD 900-1250) and the Vijayanagara dynasties (AD 1336-1630), along with the process of (b) the economic consequences (trade and agriculture) and (c) the *Bakti*, the religious ideology. The author’s study takes these three factors as the criteria for the social processes that would help her to underpin and understand the spatial landscape of temple locations in Chennai.

#### 4.1.3 Socio-political domination

The prevailing political climate of the Tamils just before the 7<sup>th</sup> century AD declined ‘due to the absence of any coercive power that could control the rich agrarian local community and the traditional forest tract societies, who fell short of basic resources and were not passive observers of the increasing influence of the rulers’ (Champakalakshmi, 1996). Nanda (1996: 9) mentions, ‘the absence of any kind of a formalised religious pantheon and consequently, the lack of impetus in evolving any cohesive notion of kingship, whether spiritual or temporal, and the polity, in the early period, was reversed during this period’. By this time, the society needed a formalised religious system and its universalisation through acculturation, a system which could combine within it many of the folk and popular elements with a Hindu tradition that swept the subcontinent by the

end of sixth century AD (Champakalakshmi, 1996). The rulers had their alliance with the priest caste, by which time the *Bakti* ideology formalised a local *varna* or social stratification, based on the work with which people were occupied (see Table 4.2). The rulers mainly intended to establish socio-political dominance with economic privileges, through religious networks.

Table 4.2 The <i>Varna</i> or the caste system of the medieval period		
Groups according to their social rank	Castes	Occupation
<i>Brahmanas</i> or priests	Brahmanas	Temple rituals, temple maintenance and temple economy
<i>Non-Brahmana</i> or other than priests	Ksatriyas	The ruling/state
	Vysyas	Trading/business
	Sudhras	The services

Appadurai (1978: 335) explores the key elements of the shared ideology as: (1) the exchange of royal gifts for temple-honours made temples fundamental to the maintenance of human kingship, (2) mobile sectarian leaders provided the links between kings and temples, (3) although kings were responsible for the “protection” of the deity, i.e., for the ultimate resolution of temple-disputes, the day-to-day management of the temples was left in the hands of local (generally sectarian) groups; (4) a ruler’s action about the temples, whether expressed in gifting or dispute arbitration, was, in a particular ethno-sociological sense, not legislative but administrative.

The two states which commanded the greatest respect and sovereignty of the age, were those of the Cholas (AD 900-1250) and the Vijayanagara (AD 1336-1630). They established and contributed, in succession, two conceptually diverse strata of “place characteristics” i.e., (1) the Chola state created a form of ritual kingship which resulted in the emergence of new as well as a refurbishment of older royal and sacred centres. Nanda (1996) explains that spatially, the settlements of the Chola period show little differentiation between a “town” and “village” (Nanada, 1996: 14), despite the growing concentration of specialisation and population around the temples and (2) the Vijayanagara state, marked heavily fortified administrative centres, embodying and encompassing the realms of the sacred and royal (Nanda, 1996: 17). Both the states (ruling castes) had their alliance with *Brahmanas* or the priest caste (see Table 4.2) and the business castes and they institutionalised the temple as a coercive power to dominate the society and its economy.



#### 4.1.4 Socio-economic consequences

The early medieval period witnesses the beginning of 'Indian feudalism', i.e., a new socio-economic mechanism, based on a land-grant system. *Brahmadeya* is defined as agricultural land granted to the priest caste by the ruling and rich families/groups (from the early fifth century AD). This phase of urban development in the early medieval period (AD 600-900) can be viewed as a process, from agrarian expansion to urban growth, centred on the *brahmadeyas* and temple institutions (Champakalakshmi, 1996). The temple had the main landholding adjacent to them and agricultural land, which was the predominant economic resource (Heitzman, 2001: 220).

By AD 800, the temple had taken on its role as a central power that controlled the social and spatial patterns of the Tamils. The *brahmadeya* and the temple evolved as two institutional forces by the priests-kings, allies in power and hence, they were the products of the Vedic and Puranic religion (traditional Hinduism). These two institutions organised agricultural production and distribution to support the large population. Clusters of such settlements merged as the foci of urban growth by the end of the ninth century AD.

The Pallava (AD 600-850) and the Chola (AD 850-1200) empires increased the temple ideology, architecture and urban design by giving rich royal patronage to Hinduism. Between the sixth and ninth century AD, the temple evolved into a major socio-economic institution. Pandeya (1996: 135) explains that during the Chola period, the temple took over the major roles of landowner, consumer, employer, patron of the arts and learning centre. In this period, another major shift occurred, with these temples assuming the role of 'economic centres' with considerable political influence. The temples appeared as beneficiaries of gifts and cash and thus, as holders of considerable wealth. Local merchant guilds had monopolistic power within their marketing territory including management of temple finances, land taxes for the state and even local political administration. The local notables donated tax-free marginal lands through the official aegis of the temples and such 'projects' were a means for preserving and expanding their own pre-eminence (Heitzman, 2001: 218). Further, the temple was a repository of inscriptional records and also had economic outreach within its precinct through educational institutions, hospitals and religious texts.

Morrison (1997) explains that the association between temples, merchants and kings were strong in this period; during the Chola period (10<sup>th</sup> to 14<sup>th</sup> centuries AD), the merchants had both economic and political power; some of the merchant guilds had monopolistic power within their own territory and their power was negotiated with the political leaders to include management of temple finances and land, and some guilds supported and occasionally administered the temples. Heitzman (2001) argues that kings, merchants and priests were the major 'social ingredients' of the time. The participation of *ksatriyas* or the ruling families in these processes was as important as *brahmanas* or the priests (Champalakshmi, 1996), who composed the genealogies for the ruling families, which was mainly intended to establish socio-political dominance with economic privileges, through religious networks, 'the strongest thread in the fabric of the medieval agrarian system' (Ludden's (1969) work as noted in Champakalakshmi, 1996). The temple was definitely the space for such a merger of activities.

The Tamil country by this time was rich in rice and cotton fields. The gradual expansion in the exchange nexus among agricultural settlements, and the continuation of long-distance trade in coastal areas, directed the energies of the trading community into the ninth century AD. This was followed by the emergence of trade centres, initially in the key areas, leading subsequently to the evolution of a trade network of such temple centres, dependent to a degree on agrarian expansion. The temple's economic or agrarian land, therefore, determined the scale of expansion.

The late medieval period (AD1200-1600) was one of dramatic change in settlement dynamics, regional and long-distance economies, and political organization. The expansion of cities was quite marked, with agricultural expansion keeping pace. Temples were the centres of agricultural expansion. Temple economies had their varied roles in agriculture, politics, ritual, craft production, and investment (see Table 4.3). In the urban landscape, the economic, political and religious spheres were essentially undifferentiated in pre-British India (Lewandowski, 1977: 210), as will be described in the next section.

#### 4.1.5 The *Bakti* (socio-religious) ideology

*Bakti* (meaning devotional worship) was a Hindu movement that was capable of sanctioning and integrating new values, which old norms could not provide, into a coherent and viable synthesis. It was a restructuring of the social way of life through devotion and provided the temple as an ideological premise and institutional means. This was one of the most significant cultural developments of the early and medieval ages, consequently, the temple as the locus of *Bakti* worship gained prominence (Nanda, 1996: 1).

The urban temple centre became the pinnacle of a hierarchy of rural shrines and commanded prime attention. The prevalent *Bakti* tradition was responsible for the enhancement of the power of both divine and human sovereigns, through the symbolism of the Cosmos-Temple-Territory (Nanda, 1996: 10). The later part of the Middle Period saw a continuous change in Hindu practice because of the rise of the *Bhakti* (devotional sects) ideology.

There was a conscious shift of socio-political importance from the *Brahmadeya* to the temple; the dynasty gave permanence to all cult centres sanctified by the *Bakti* hymns. They replicated the temple's role as the super-ordinate instrument of integration in each of them and in the newly emerging agrarian centres and urban nuclei. Both urban and agricultural expansions have been linked to Hindu temples. Devotional religion fitted into a web of cultural meaning and physical confirmation, supported by leaders' 'ideological constructs' (Heitzman, 1991: 54); their patterns of belief were their patterns of power.

In summary, the temple was the centre for the socio-economic, political and religious life of the people and therefore, the spatial articulation of the temple as a centre of a settlement became an integral part of temple urbanism, as is described in Table 4.3.



**Table 4.3 Three phases of centralising the control through the temples**  
(an extraction from Champakalakshmi's work, 1996)

Phases and periods	Major contextual aspects
Phase I – The seventh to eight centuries AD Pallava dynasty	<ul style="list-style-type: none"> <li>• Valleys and rivers invariably accompanied by irrigation networks</li> <li>• Most of <i>brahmadeyas</i> remains agrarian/rural centres, while some at latter stage developed into urban nuclei</li> <li>• The dynasty projected the <i>Puranic</i> or <i>brahmanical</i> ideology through rock-cut and structural temples in Dravida style in Kancipuram, Mahabalipuram and other parts of Tondaimandalam.</li> </ul>
Phase II – The ninth to tenth centuries AD Chola Dynasty	<ul style="list-style-type: none"> <li>• Number of such agrarian units increased</li> <li>• Major restructuring of the agrarian economy</li> <li>• Every <i>kottam</i>/division had a number of irrigation works</li> <li>• Construction of sluice, waste weir and channels</li> <li>• Organised committees (<i>sabhas</i>) of priest community</li> <li>• Demarcation of landownership rights and landuse or category of land</li> <li>• The <i>brahmadeyas</i> and the temple centres were the harbingers of advanced farming methods exemplified with the technology of irrigation (the tanks) and the seasonal relation of the cultivation process.</li> </ul>
Phase III – The eleventh to thirteenth centuries AD Chola Dynasty	<ul style="list-style-type: none"> <li>• As a major centre of urban concentration, Kancipuram's economic reach covered all the <i>nadus</i> of the city and even beyond.</li> <li>• The land relations came to be organised around the <i>brahmadeya</i> and temple within three categories of landowner – the <i>brahmana</i>, the <i>velala</i> and the temple, emerging as local elite.</li> <li>• Societal organisation was based on the <i>varna</i> framework, but expressed through two broad categories – the <i>brahmana</i> and the non-<i>brahmana</i>, within which most of the occupational groups were placed in a ritual hierarchy around the temple, the concept of purity-pollution operating at all levels.</li> <li>• The act of validation mainly centred on the temple, its construction, participation in gift-giving and ritual activities in a ranked hierarchy.</li> <li>• There existed a close reciprocity between the perception of a royal centre and sacred centre due to the ritualistic character of the Cola kingship; The temple complex therefore, often served as a royal court and palace, as did the court emulate divinity, its direct link with god, through temple rituals (Nanda, 1996: 13).</li> <li>• This period met tremendous innovations in temple architecture, both structural and stylistic (<i>vimanas</i>, <i>gopuras</i> and modest enclosures) (Nanda, 1996: 13).</li> </ul>

#### 4.1.6 Spatial aspects

##### a) The location of the temple

Two important spatial aspects were studied by the author in this context: a) the location of the temple within the overall urban configuration and b) the planning and use of the specific temple location itself. In the first case, it should be noted that by the medieval period, the spatial allocation of the lands within an urban configuration was still based on five traditional landscapes, i.e., they typically had an inland capital and a coastal port (see Appendix 1, page 198). That is, medieval urbanisation had the *brahmadeya* and temple centres on the inland side of the Tamil landscape; and the *nagaram* (commercial settlement) on the coastal side. These three, namely, the *brahmadeya*, the temple and the *nagaram* are frequently referred to as the 'urban elements' of the era. Each settlement had either a central temple or a cluster of temples. Such a merger with the earlier traditional concepts (300BC-AD 600), indicates the degree of social power that the temple had by this time (AD 900 onwards).

Hietzman (2001) explains that the spatial articulation of temple urbanism in the Chola period had predominantly rural features that signified the continuing importance of rural context to its economy. Even the houses of the ritual specialists and economists did not encroach on contiguous temple lands but instead, inhabited sites in streets, neighbourhoods or hamlets. This resulted in the survival of village characteristics within urban space and reflected the dominance of rural notables in economic transactions that supported grander temple rituals.

It is useful to follow the classification of the temples, according to Champakalakshmi, who categorises the ceremonial temple centres as:

- Single large temple centres (examples: Tanjore, Madurai, Chidambaram, Srirangam, Tiruvannamalai); and
- Multi-temple centres (for example: Kancipuram (discussed below), Kudamudukku-Paliyarai).

Whilst the single, large temple centres have been studied as an urban process by several scholars, this thesis will focus on the multi-temple centres or the 'rudimentary structures' which were typical of the Tondaimandalam region, the author's study area.

#### 4.1.7 Single large temple centres

It is mostly these single large temples that received royal patronage (Champakalakshmi 1996) and they mostly became ‘supra-regional pilgrimage centres’ (Nanda, 1996) (see Figure 4.1). The urban configurations of Chidambaram, Madurai, Thiruvannamalai, Srirangam, Tanjavore and Kumbakonam show their spatial organisation, based on the cosmic and traditional planning principle of India, the *Vastu sastra* (Srivatsan, 1995). These were royal and ceremonial centres of two types, the unfortified (Chola period), and the fortified (Vijayanagara period). Nanda (1996) and Lewandowski (1977) discover that the question of the spatial realms of these temple centres was resolved by the re-affirmation of the deity’s supremacy.

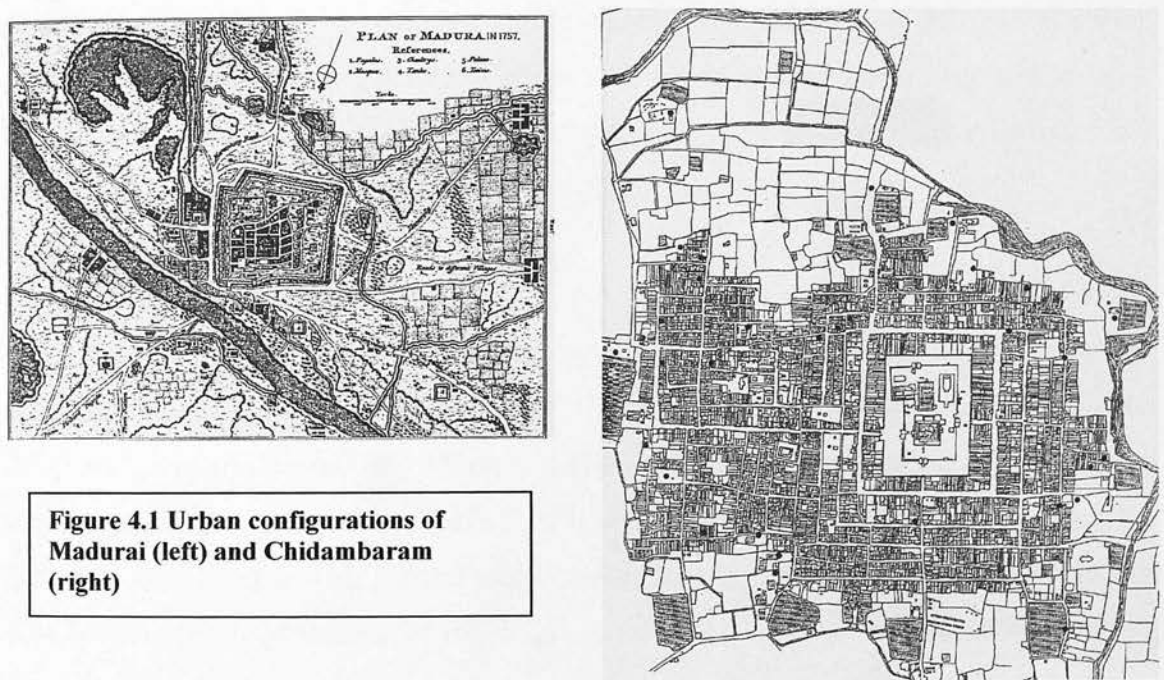


Figure 4.1 Urban configurations of Madurai (left) and Chidambaram (right)

The following points can be noted here:

- They were mainly royal creations.
- These temples became the social and spatial centres of the entire settlement around which the socio-economic pattern of the people was mapped, based on the *varna* and cosmic concepts.
- Markets were neither central nor dominant, but a product of the demands arising from the nucleation of the ceremonial centre.



- They were organised as separate revenue units and further increased in size through temple donations, in the form of hamlets and fully-fledged revenue villages.

#### 4.1.8 Tondaimandalam, a multi-temple centre

Historic Chennai was in the northern part of the Tondaimandalam regime and Kancipuram was the capital city and Chennai region was one of its suburbs from the Middle Ages to the British period (see Figure 4.2). The temples in Chennai region today represent a few of the temple clusters of *Tondainadu* or *Tondaimandalam*, a traditional regime of various dynasties of south India, namely, Pallava, Chola and Pandya. In the early historic phase, tracts of relative isolation largely marked this region – hills and forests – plains and the coastal eco-zones which were confined to the palar-Cheyyar valley. The *Sangam* (see Appendix 1, page 198) refers to large tracts of unsettled land, forest and hilly regions, with few settlements, though some of them were of considerable size, for example, Kancipuram, the state's capital.

During the seventh to ninth centuries AD, the Tondainadu or Tondaimandalam covered an area of 24 divisions or *kottams* which were integrated by Pallava and this was the beginning of early medieval urbanisation. The urban space of Kancipuram (see Figure 4.2) was the inland capital city wherein the temples of Chennai city had their religious and economic networks. Burton Stein (1999) explains that the temples of Chennai region had their connections with similar and organisationally linked religious institutions in Kancipuram, the major centre for religious and cultural institutions over a broad region of the central Tamil plain.

The chief integrative factor was the *brahmadeya* and the temple (Champakalakshmi, 1996), which turned the subsistence-level agricultural settlements (*urs*) into surplus-oriented ones grouped into minor divisions (*nadu*) within the 24 major divisions (*kottams*) (see Table 4.4). The process was structured spatially, through amalgamations of several non-*brahmandeya* agricultural fields, with their rural temples at their centre, controlled by and combined with the *brahmadeya*, with one urban temple (see Figure 4.3) at its centre. Chola temples were located in different environmental contexts of different sizes, and in different relationships to political centres. The temples' economic transactional networks depended on spatial locations with respect to the central temples (Heitzman, 1997).

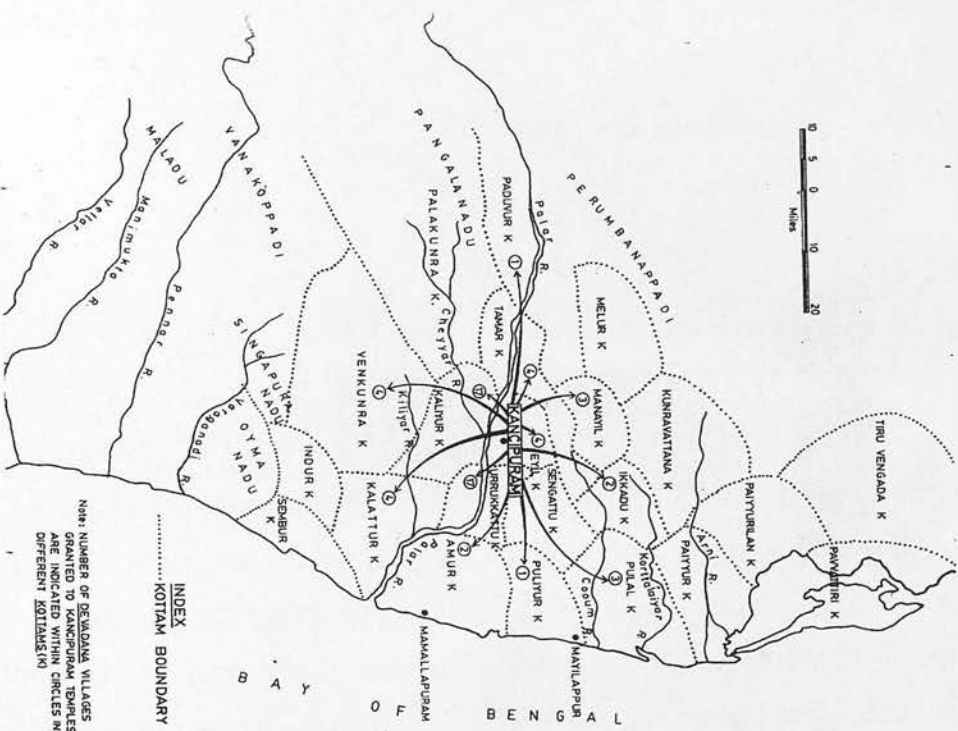
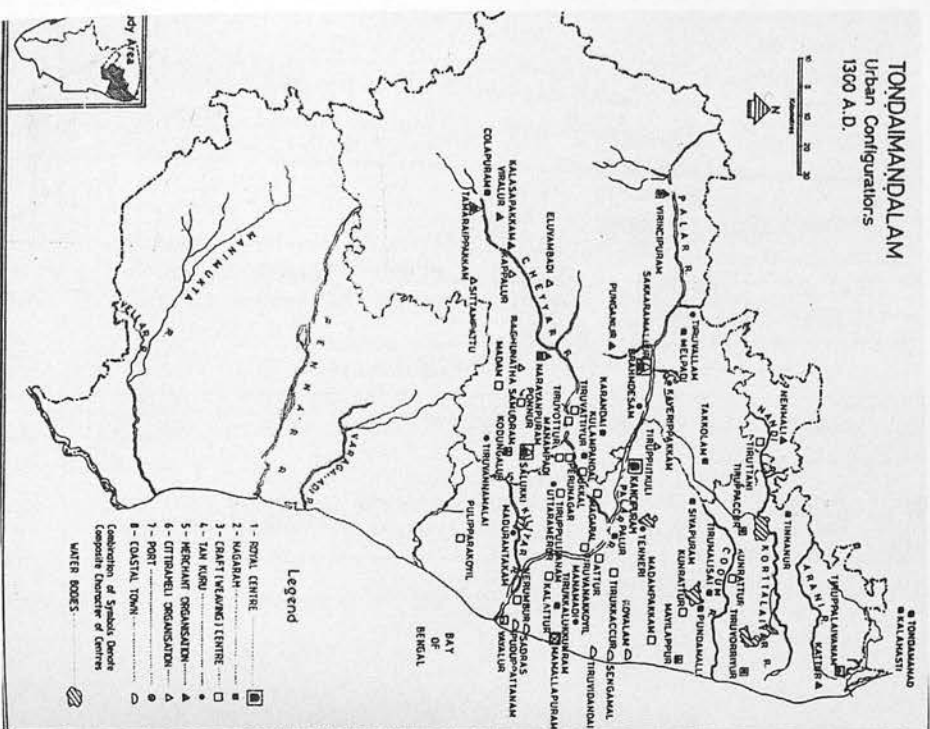


Table 4.4 The spatial divisions		
Spatial division	Explanation of the terminology	Description in the region of study
<i>Mandalam</i>	Larger extent or the extent of the whole regime.	Thondaimandalam
<i>Kottam</i>	Subdivisions of the <i>Mandalam</i>	24 (Chennai had two of them – Puliur and Pulal )
<i>Taniyur</i>	Capital space of the <i>Mandalam</i> – each of the <i>Mandalam</i> had one <i>Taniyur</i>	Kancipuram
<i>Nadu</i>	Combinations of several agricultural units called <i>Ur</i>	Many
<i>Ur</i>	Small agricultural units; last of all in size; joined with <i>Taniyur</i>	Many
<i>Eriveerapattinam</i>	Villages of the nomadic traders	The temples of Chennai at Puliur district
<i>Nagaram and Managaram</i>	Trading centres	The temple of Chennai at Pulal district

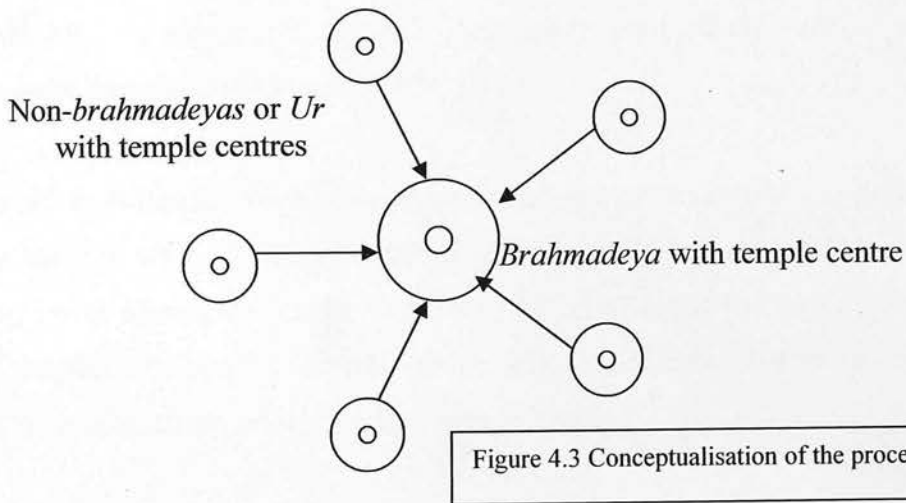


Figure 4.3 Conceptualisation of the process

Agricultural settlements grouped together are called *nadu* and groups of nadus grouped together are called *kottam*; there were 24 such *kottams* found in the region (see Table 4.4). These agricultural settlements were either *brahmadeya* or the temple and were products of the *Bakti* ideology. These settlements, sponsored and supported by the ruling families, developed into institutions of substantial political power and social dominance with economic privileges. In return, this formation led to a more intensive organisation of production to support the large population of these settlements. The real advantage was in integrating older settlements and non-*brahmadeya* villages (*ur*) into the new agrarian system, and also bringing virgin land under cultivation. This intensive process of agrarian



integration is reflected in the numerous *brahmadeya* and temple centres of the seventh to ninth centuries, which emerged spatially, in the form of religious architecture, with important political and commercial networks.

The *brahmadeyas* and the temple centres were the 'harbingers' (Champakalakshmi, 1999: 190) of advanced farming methods, exemplified by the technology of irrigation (Stein, 1960) and the seasonal relation of the cultivation process (for further detail, see Table 4.3). The priests were organisers and managers of production in *brahmadeyas* and the land-owning peasants in the non-*brahmadeya* settlements, where the focus of activity was the *brahmanical* temple.

Market spaces in this period were of two types, period markets and fairs; and permanent urban market spaces. Whilst permanent market spaces were given specific locations as explained below, temporary markets mostly emerged at temple locations during annual festivals. Markets were given strategic locations in the landscape where producing was not divorced from selling (Ayyar, 1987).

In one south Indian town (Kavipoompattinam), the urban centre had both market and temple squares with two distinct urban lands, palatial and residential, on either side (Ayyar, 1987). During the medieval period, the urban forms had two clear urban nuclei, firstly, inland development centres (either with royal/administrative or temple centres called *Taniyurs*) and secondly, market or trade centres.

The major route in the first case (i.e., royal and trade centres, see Figure 4.4) was from the palace to the market and in the second case (temple centres and trade centres), with the absence of the palace, the route was from the temple to the trade centre. The second case (see Figure 4.5) was more frequent than the first, since the palace or royal centre appears once in a regime but the temple centres appear in both agricultural (*Taniyur*) and commercial (*nagaram*) settlements within a regime (see Figure 4.6). It is important to note that the trading routes connected the principle temples of these settlements.

Spatially, the urban and rural landscapes had little to distinguish between them. The temples were invariably central to both landscapes and both had agriculture as a major preoccupation; on the other hand, the *nagarams* or trade centres, were the first secular use

of urban land in the history of the Tamils. Eventually, when these trade centres became preoccupied with local exchange and surplus trade, they grew and became settlements, which was another replica of the temple centres (or Taniyur) (Champakalakshmi, 1996).

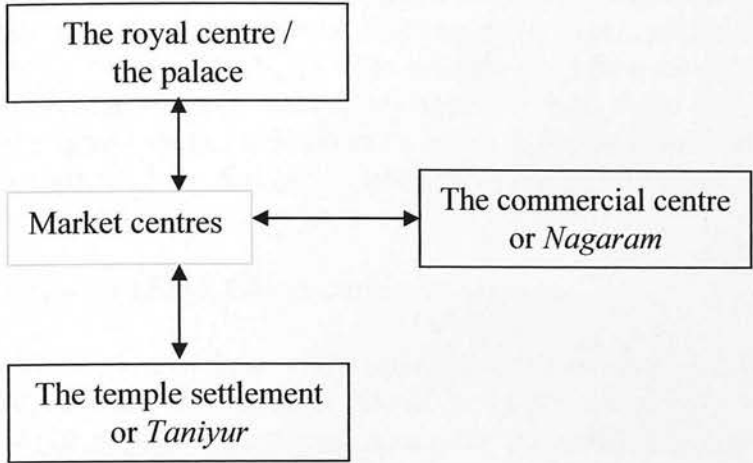


Figure 4.4: The spatial connection between, the royal centre, temple settlement and trading centre (case 1)

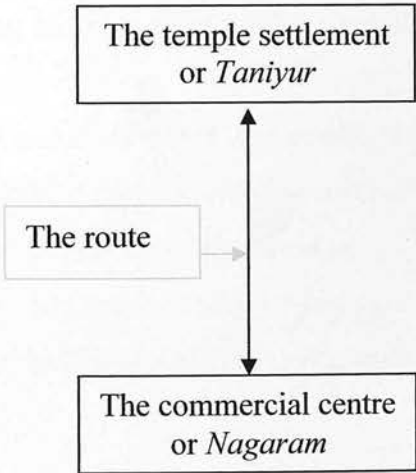


Figure 4.5: The spatial connection between the temple settlement and trading centre (case 2)

## b) Spatial planning of the temple location

In *Town Planning in Early South India*, Ayyar (1987) mentions the origins of the city and how the king developed this origin as follows:

“...with this idea he (the king) first of all cleared the forest (*mullai Tinai*) and after a clean deforestation of the area he dug out many tanks, constructed a beautiful mansion for himself and houses for others; built a fine temple in the centre and established the several castes in several areas, built a fort with walls around and with a grand entrance in front, a small gateway in behind; and mounted on the ramparts of the fort all the necessary defences for guarding the city against surprise attacks.”

In *An Introduction to Tamil Culture*, Gnanasoorian (1984) states:

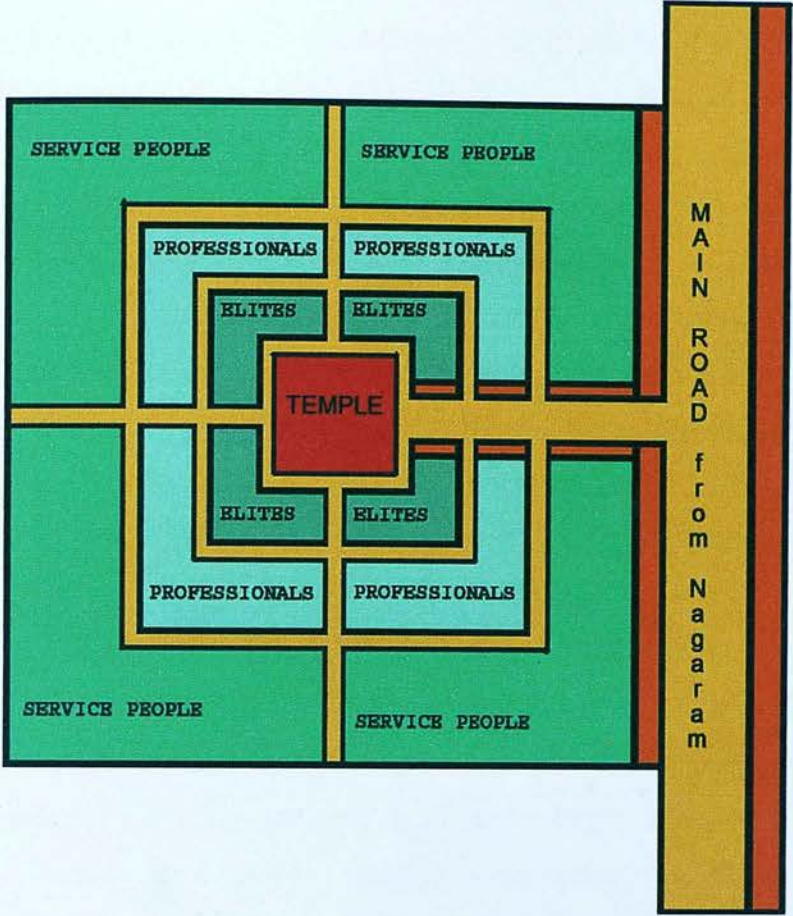
“The temple is conceived as a model of the universe (Gnanasoorian, 1984) with its centre as sanctuary the seat of deity, the pivot of the world; around this sanctuary a simple or more complex wall represents the mountain ranges that border the earthy world and around the temples are pools just as oceans surround the world. These temples range from small rudimentary structure to the vast architectural complexes of the 12<sup>th</sup> century AD e.g. Madurai Minakshiammam and Srirangam Ranganathar Temples.”

The temple was the initial element in and at the centre of any new settlement and secondly, the planning and organisation of the temple was a microcosm.

Both the agricultural and trade-based settlements were mostly organised and operated by temple urbanism spatially and socially. *Tondaimandalam*, which is the region of this study, is no exception to this, as is discussed later in this chapter. The spatial planning of such temples can be diagrammatically expressed as shown in Figure 4.6. The social process behind such a spatial organisation is described in Table 4.5.



**Figure 4.6 Typical spatial planning of the temple locations**



**Table 4.5 Description of spatial, social and economic aspects of the temples**

<b>Spatial characteristics</b>	
▪	Cosmic structures and forces: elite at the centre and others at fringe
▪	Organised to serve its large population in its socio-economic needs and glories.
▪	Multi temple districts lead towards the trade centres ( <i>nagarams</i> ).
▪	Each of the temple districts was structured on the same pattern covering 5-6 sq.km.
▪	Temporary markets during festivals – near the temple
<b>Social characteristics</b>	
▪	Social dominance is conspicuously illustrated: stratification of residential areas of this pre-industrial cities
▪	The dominant socio-economic groups are located next to the temple and the other castes are located, based on the purity-pollution criteria operating at all levels: the more pure, the closer to the temple.
▪	The population concentration of the entire settlement – forms a node in the total urban landscape
<b>Economic characteristics</b>	
▪	The emergence of trade centres ( <i>nagarams</i> ), initially in the key areas, led subsequently to the evolution of a trade network of such temple districts, dependent on a degree of agrarian expansion.
▪	The local commercial shops – local trade of and for local people (offerings, luxury and everyday commodities)
▪	Markets – wholesale trade

#### 4.1.10 Chennai region

When studying the context of the temple districts of Chennai in the medieval period, it is important to present their trade and commercial developments because the traditional temple settlements at Chennai were mostly, trade-based ones. Initially, the trade nexus was to serve the luxury commodities market, especially for the royal families. By the end of the ninth century AD, it was fully developed in serving the need and desires (Nanda, 1996) of society, while the number of such trade centres increased and became a local body (of *nagarattar*). By the end of the ninth century, these trade centres maintained local markets supervising the flow of goods, and they provided a regular link between the local cultivators of agricultural commodities and itinerant traders (for long-distance luxury commodities). By the tenth and eleventh centuries AD, further diversification in markets and a trading pattern had evolved through not only agricultural commodities but also extended to folk arts and craft works as commodities (or craft production centres).

This stage achieved a well-organised structure with local and neighbouring regions and developed links and networks with them. The merchant class established its social prestige and economic status through collective action and royal patronage, as well as gaining supportive political roles, by donating or gifting a larger volume of gold or money to the temple. Social status, followed the local caste system (see Table 4.2, page 71). The trade centres (*nagarams*) and a larger version of them (*managarams*), were planned socially and spatially, similar to that of the organisation of the temple districts. The outward flow of gold and money deposits from the trade centres to the hinterland is attested to by the local priests bringing in a reciprocal flow of rice, ghee and other ritual requirements to the temples of these trade centres.

The Chola state encouraged overseas trade and therefore, interaction between the itinerant traders and local trade centres was of great importance in the medieval urbanisation. The culmination of such trade development was witnessed through the creation of two trade-based settlements, mainly on the coastal trade routes:

- Protected merchant towns: called *Eriveerapattinams*, were established by a royal charter (eleventh century AD) on the trade routes, and commercially important inland areas and distribution points.

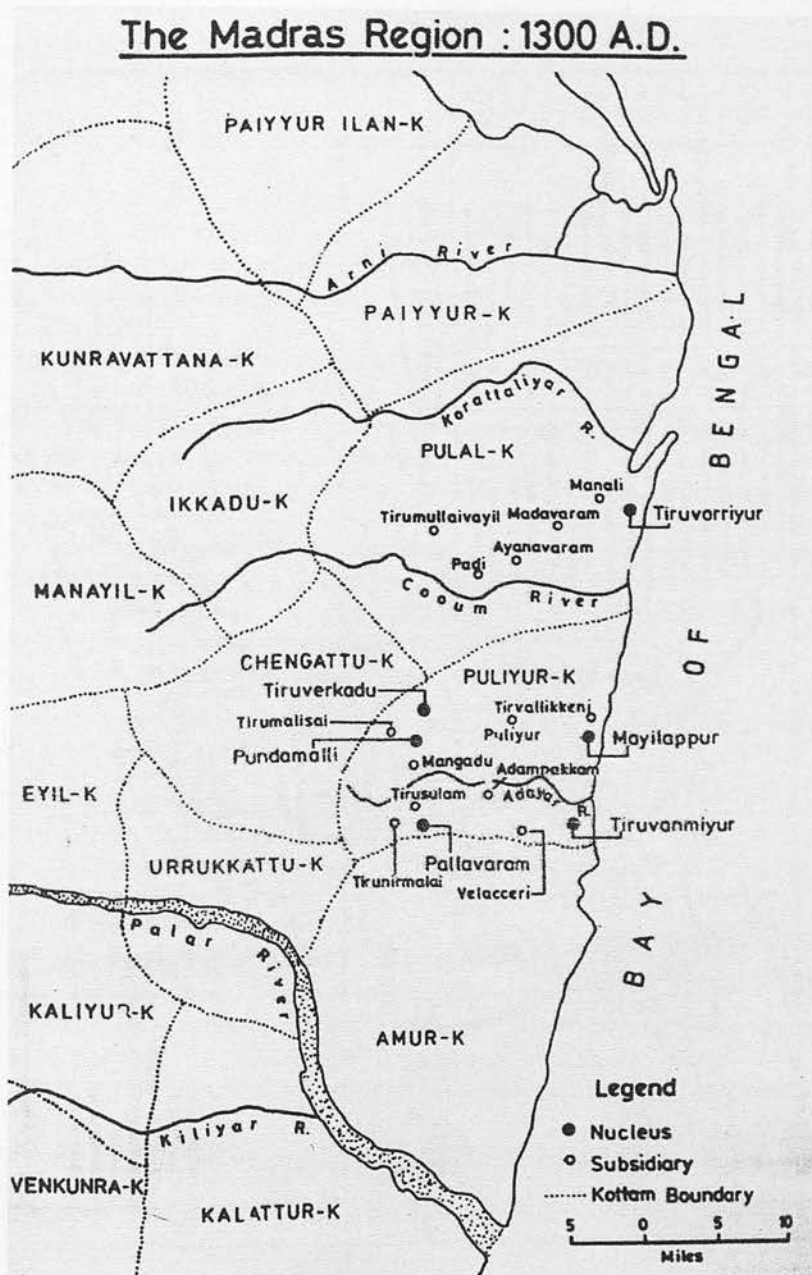
- Halting stations: on their business explorations, traders settled at strategic locations on the trading routes, especially halting stations, which were mainly on the coastal routes. Such settlements were seemingly absent from royal or trade centres (Champakalakshmi, 1996) but noticeably, were active in the coastal ports like Nagapattinam and Chennai (Mayilappur).

By this time, a number of coastal towns were established of which the most important was Mayilappur (the present Chennai). The importance was further exemplified by the community (folk craft workers and itinerant merchants) of Mayillapur who formulated the rules of conduct for traders and controlled Kattur, (another settlement on the trade route) which they were instrumental in converting into a protected merchant town. “The Nagara was incomplete without a major shrine and certainly a major temple could scarcely exist without an urban context” (Nanda, 1996: 19). The city and its shrine, in every sense, completed and complemented each other, thereby offering “completeness” (Nanda, 1996: 19) to the society and culture, of the larger region during the medieval age, with the temple as the central embodiment and summation of the elements of its social and cultural organisations.

Historic Chennai (see Figure 4.7) is the northern part of Tondaimandalam and developed from several clusters of settlements, mainly distributed in the two sub-divisions (*kottams*) of Tondainadu, namely:

- Puliur – comprising the districts of Mayillapur (second and ninth centuries), Tiruvanmyur (eleventh century), Elumur (eleventh century), Poondamalli (eleventh century), Pallavaram (eleventh century) and Tambaram (Champakalakshmi 1996; Pasupathan, 1967: 11); and
- Pulal – comprising the districts of Thiruvotriyur (ninth century), Ayaranavaram (ninth century) (Champakalakshmi 1996; Pasupathan, 1967).





**Figure 4.7 Madras region 1300 AD**

Of all these various settlements, those of Mayillapur and Tiruvotriyur (see Table 4.6) were built by trading communities and were found to be the most traditional and contextually important ones of this period as described in Table 4.5.

**Table 4.6 Two important temple villages**

**Description of the two temple locations of Chennai city by the end of the 17<sup>th</sup> century AD**

**Mayillapur (now called Mylapore)**

- In the second century AD, there was evidence of commerce as per Ptolemy's reference to Mailarphan.
- In the medieval Tondaimandalam, it was the most important trade centre (Pasupathan, 1967) of its region. With an early exchange nexus dominated by external trade that had links with the royal port centre of Mahabalipuram (Pasupathan, 1967).
- It was the coastal port centre that had a community engaged with both itinerant trading and craft-production centres.
- During early medieval urbanisation, it came to be linked with the network of *nagarams* and inland commerce from the ninth century AD.
- This settlement provides contextual evidence which would indicate a close relationship between the prospects of the commercial activities, both trade and local craft, along with the *Bhakti* institutions of *Saiva* monasteries of various sects and lineages in the ninth and tenth centuries. The monastic network seems to have provided a great impetus to trade and craft production in Tondaimandalam (Champakalakshmi, 1996). The weaver sects acquired a special importance in commerce.
- The presence of early two *Bhakti* temples (Kapaleeswarar and Parthasarathy temples) along with a Jain temple proves an urban concentration in this cluster.
- It was a weaving centre that had trade links with the city of Kancipuram.

**Thiruvotriyur**

- A ninth century cluster that developed into a trade centre or *nagaram*.
- Served as nucleus of the second urbanisation of this region
- Highly integrated among the other *kottams* and even the northern-most point of the Tamil coast (Tiruppalaivanam) which was an important trading centre with interior and other *nagaram* centres in the thirteenth century AD.
- Linked to a neighbourhood of Manali which was a *brahmadeya*
- Had the *Saiva* temple and became a Taniyur by dint of its characteristics
- It assumed multiple roles, politico-economic, commercial and religious and was next to Kancipuram
- It was chief centre from which royal officers supervised and audited the other temples of this region.
- It acquired over ten temple-donated villages and lands within the *kottams* of Puliur, Pular and Paiyur.
- In addition, it was a weaving centre looking after its textile trade.

## Summary

In medieval south India, the process of 'centrality' (Champakalakshmi, 1996) would seem to have been predominantly at work in the emergence of urban hierarchies and in shaping the contours of the city. The social 'centrality' offered a hierarchy to the spatial organisation and a concentration in the social organisation. Temple urbanism in the medieval Tamil tradition, therefore, had continuity, in terms of a clear, spatial articulation, given that the temple was a locus of urban configuration. Spatially, various land uses were assigned and organised around the temple, based on legitimate and 'fringe' operations accordingly to the purity and impurity levels of activities. For

example, temple at the core and the burial/cremation land at the fringe. These land uses were basically socio-economic in organisation because they were based on a traditional *Varna* system. The temple was the centre of urban concentration. It was a consumer, in that people/worshippers gained their status, based on the gifts or *devadana* they offered to the temple. The alliance of temple and commerce was highly valid, spatially and socially throughout the pre-British period.

## **4.2 The British phase (AD 1600-1947)**

### **4.2.1 Social context**

The late medieval period (AD 1200-1600) saw an unprecedented expansion in the volume of international exchange (Morrison, 1997: 101). The expansion of trade networks, the participation of new groups of traders, and the political volatility of the period created the contexts in which 'portfolio capitalists' emerged later in the seventeenth century (Subramanyam & Bayly's work (1990) as noted in Morrison, 1997: 87 & 101). The early modern period (AD 1600-1800) saw the beginnings of sustained European involvement in south Asian markets and it brought an unprecedented expansion in the volume of international exchange and trade.

All over India, this period witnessed the shifting roles of specialised institutions as monasteries, temples, and guilds (Morrison, 1997: 88 & 91). These economic transformations in the dynamics of political and social power changed the religious landscape. In other words, there was a shift of importance from a religious-political association, to a secular-political one in this period. The East-India Company encouraged people of various races to reside in Madras (Barlow, 1921: 19). Temple urbanism, as a process, which was heavily patronised by the political regimes, suddenly lost support from the start of British rule and it shifted the prevailing urban element from the temples to a new focus, i.e., trading industries. The city attracted immigrants from the temple towns of South India who were willing to work for the British in search of improving their socio-economic status.



#### 4.2.2 Spatial context

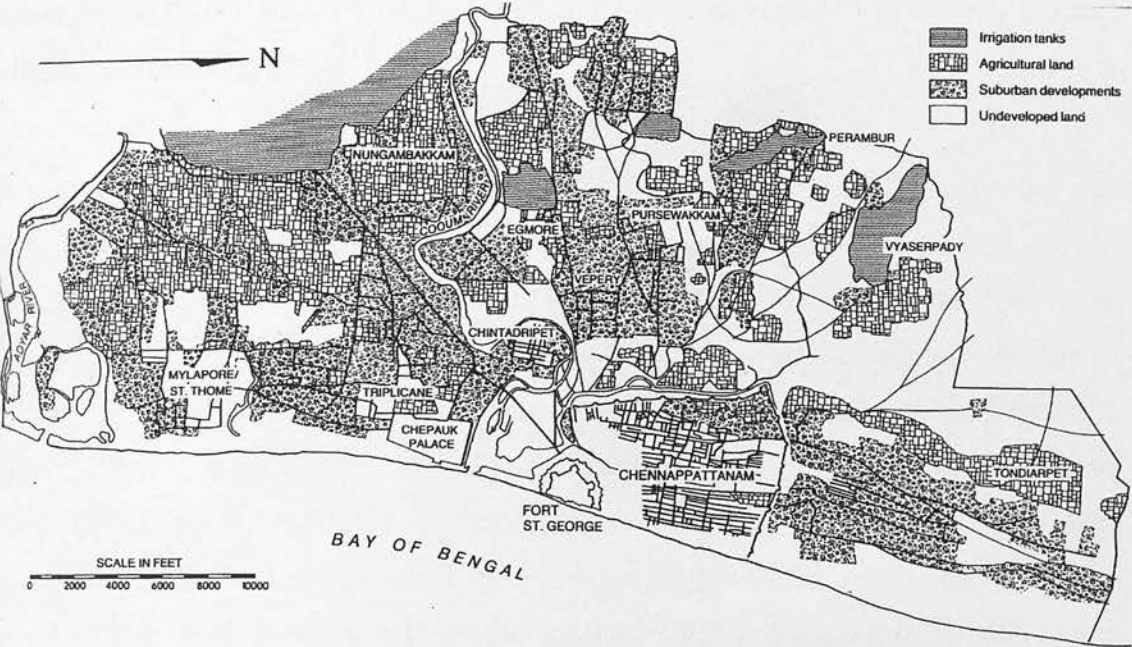
Chennai or by then Madraspattinam, as it was called, was an insignificant town on the Coromandel coast and was empowered as a city by the British with their Western world view, which was 'purely secular' (Lewandowski, 1977: 196) in ruling and planning attitudes. Burton Stein (1999) explains that when the British arrived, Chennai had already had an identity for almost a millennium. He adds that it was essentially a religious identity, stemming from its Lord Siva and Lord Vishnu temples and their connections with the similar and organisationally linked religious institutions in Kancipuram, the major centre for religious and cultural institutions over a broad region of the central Tamil plain, including the 17<sup>th</sup> century small trading enclave of Fort Saint George. This colonial city did not stand alone at the centre of its own universe, like any other temple town of that time, it was linked to a series of other satellite cities, and ultimately, it was subordinate to the foreign capital on which it depended for its existence (Lewandowski, 1977: 196). The new Indo-sarcentic architecture emerged with many 'principle buildings' (Barlow, 1921) like forts, cathedrals, senate house and even walls and gates.

It is the British phase of the city that has had numerous critical comment by various scholars, mostly in terms of the shift in focus from the religious to the secular (Stein and Lewandowski, 1977). Basu (1999) mentions the conundrum of its place in a geographical sense (see Figure 4.8), its name, its distinction of urban and suburban sectors, its distinct European and Indian sectors and the ethnic origins of the native people.

Basu states that for Europeans, Madras was something of a new city experience; one not to be had in any other part of the world. They saw the city with no central focus, no clear boundary with urban and rural localities, no qualitatively distinct features that in its cultural and social life separated it from its agrarian surroundings. Its suburban neighbourhoods looked like villages, and villages like bustling towns. For native inhabitants, Madras was a mix of people and functions; a city that had an idiosyncratic spatial organisation and one that combined the activities of political, commercial, ritual and agrarian centres. In other words, they had a central ceremonial place called a temple that organised all the other related urban mechanisms, as opposed to being a city with an established 'centrality' (Champakalakshmi, 1996).

Lewandowski (1977) compares Madras with Madurai (a ceremonial temple town). The dominant spaces of the city were busy and dominant European settlements had their trading units at the core. Lewandowski adds that people who resided close to this core were the dominant group of the society. It is important to this study to see how the temples maintained their significance in the city.

**Figure 4.8 Madras 1798 by the Court Recorder**



In her important work, Susan Lewandowski (1977: 202) explains that the British planned the nucleus of Madras, and that its form was designed to meet its principal function of trade and commerce. From her findings, it can be summarised that chronologically, the British developed the city into three spatial units (see Figure 4.9): firstly, the British core of commerce and administration (17<sup>th</sup> and 18<sup>th</sup> centuries); secondly, the new satellite towns developed during the British period (18<sup>th</sup> and 19<sup>th</sup> centuries) that depended on foreign trade; and lastly, the inclusion of the already existing temple villages into the urban nexus (18<sup>th</sup> and 19<sup>th</sup> centuries). This three-fold classification is used by the author to explain the social processes spatially in the following sections.

### 4.2.3 The British core temples

The early plan of Madras shows the economic dominance of the colonists, with the fort providing the visible centre and the cultural heterogeneity, with residential patterns

segregated by ethnic origin (Lewandowski, 1977:206). The indigenous settlements were based on different caste groups, which were given streets on which to reside in Black Town (see Figure 4.9). Black Town was occupied by *Beri chettiyars*, a Tamil business caste, which built numerous temples. Lewandowski's hypothesis was that in the 18<sup>th</sup> century, the *dubhash* class or the local employers of the East India Company used a south Indian model of kingship in their exercise of power in these centres, for they were responsible for arbitrating caste conflicts and protecting the Hindu sacred order in the city during this period.

Lewandowski (1977) implies a direct correlation between the size of the settlement and the significance of its dominant temple. In a comparison of Madurai, an ancient temple city and Chennai (Madras), a modern colonial-industrial city, she notes 'the more conspicuous place of the temple in the former, and its relative subordination in the latter' (as noted in Spodek, 1980: 257). She discusses the continuing role of the temple in validating power, even among the rising mercantile and industrial groups in Chennai (Madras). These groups built and supported temples to validate their arrival as new elites. They copied or 'mimicked' the older model of the temple building as a sustaining raja (Spodek, 1980: 258). Table 4.7 shows the relationship of important temples during the British period to their patrons, who were merchants.

Joanne Waghorne (2004: 37) explains that the weavers, dyers and other artisans settled in Black Town, which grew within ten years. At the centre of this new town, a temple was built by the local *Beri chettiyar*, the merchant caste and later developed an intimate relationship between temple building, resettlement and the establishment of modern commerce. The temple was sandwiched between narrower *mada* streets (temple-car streets) and became a victim of urban squeeze. Later, the temple location became a central place for public business, both public and private. By this time, the formative role of Indian merchant communities in the growth of Madras was expressed through the building and endowment of temples. The economic activities appear for the first time just outside the temple.

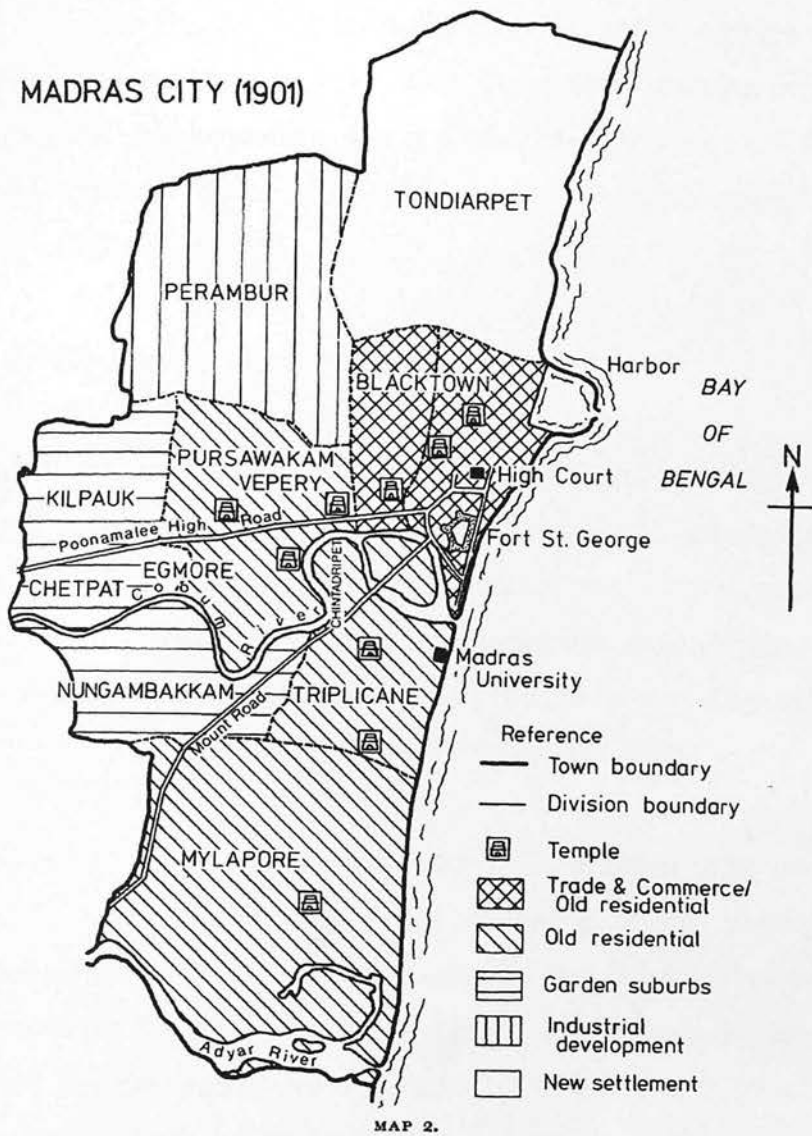


**Table 4.7 List of temples built during the British period**  
(Source: Lewandowski, 1985: 159)

Date	Location	Temple Name	Patron
1640	Black Town	Chinna Kesava	Chief Merchant East India Company
1680	Peddanaikenpet	Ekambareswarar	Chief Merchant - E.I.C.
1700	Kosapet (Park Town)	Kandaswami	Potter caste
1717	Peddanaikenpet	Kalyana Varadaraja Swami	Vira Ragava Brahman (his uncle took control in 1725; he was an E.I.C. Dubash)
1725	Muthialpet	Kachaleswarar	Merchants of the Left Hand castes
1734	Chintadripet	Sri Adipurisvarar Sri Adikesava- Perumal	E.I.C. Dubash
1760	Peddanaikenpet	Chinna Kesava Chinna Malliswarar	Dubash
1787	Muthialpet	Krishnaswami	Merchants of the Right Hand castes
1804	Peddanaikenpet	Kanyaka Parameswari	E.I.C. merchant and Komati caste headman

Appadurai (1978: 165) notes that the temples, at the normative level, were inessential to the authoritative basis of British rule and therefore, the public exchange of gifts and honours between king and deity largely ceased to exist. The British gradually expanded their day-to-day involvement with temples, but grew increasingly reluctant to resolve temple or religious disputes. He also points out that "new conflicts" emerged because of not having a Hindu king to resolve temple disputes and the generalising tendencies of the case-law of the British courts

Figure 4.9: Madras city, 1901



The temple typology of the pre-British period was transformed into a new style i.e., the market place right at the sacred place (Waghorne, 2004:65). This can be seen in Waghorne's study, who also notes that the British perceived the temples as landmarks and proposed a commercial route connecting the temples at George Town. The new temples, constructed by the rising commercial groups, frequently stood at the centre of or near busy markets. Business houses lined with *mada* streets (temple-car streets) were built to accommodate festivals. There was an open confluence between a market place and a sacred place.

#### **4.2.4 The new satellite colonies' temples**

Black Town at the centre and satellite colonies close to the centre, like Chindadripet, that developed during the British period, functioned as 'economic satellites in relation to the Fort St. George' (Lewandowski, 1977: 202). These satellite settlements had temples in their main streets. Washermanpet was a similar satellite settlement designed for the washers and dyers of cloth, who were mostly the Telugu-speaking and Vishnu-worshipping castes.

#### **4.2.5 The already existing villages' temples**

Late eighteenth-century Madras grew so much in size and population that it no longer resembled a self-contained enclave with its clearly distinct European, Indian, urban and suburban sectors. Once separate spatial and social spheres now overlapped, and the other older Fort St. George-Black Town core was spread over a larger area. Triplicane area, which was located close to the Black Town, became a subsidiary market centre and satellite of Black Town and the Fort (Lewandowski, 1977: 203).

For the majority of the city's population, the notion of living in an isolated homestead was culturally alien, and they preferred to reside in the vicinity of a temple (Lewandowski, 1977: 208). Basu (1999: 242) states that defining Madras in 1800 was an act of perceptions; the perceptions were shaped by political considerations, cultural values, social context, aspirations and habit. The city had a loose aggregation of settlements ranging widely in size, composition, character and history.

While every ethnic group had its own enclave in Madras, inhabitants tended to associate with their own. The city had a place for everyone, from both local and global regions. Basu (1999) argues that the several ancient temple complexes that existed within or very close to the suburban or 'self-contained villages' (Lewandowski, 1977: 203) were extremely important in reinforcing cultural continuity. Mylapore, Thiruvannmyur, Thiruvetiyur and Triplicane all continued the worship of deities, the granting of endowments, the support of Brahmin communities, and structural improvements for centuries. They created tangible and spiritual links between the past and present. These temples provided entertainment and diversion as much as spiritual refreshment and



cultural validation. They created bonds of community and continuity in their own evolving settlement. Stein (1999) mentions that even for the businessmen from George Town, it was their participation as worshippers in one or more of these older temples that gave them their cultural identity.

The then existing pilgrimage centres or temple villages had a large population of *Brahmins*, the priest caste. The settlements of Mylapore and Triplicane had their own temple, functions and bazaars. These “caste neighbourhoods” (Lewandowski, 1977: 208) built and supported their own temples. With the political union of the local Islamic *Nawab*, the British managed to lease the lands of Triplicane, because of which, as Lewandowski puts it, Triplicane became a subsidiary market centre and the next satellite of Black Town and the Fort. In the process, Triplicane, Mylapore, Purasaiwalkam and Vepery were brought into a closer satellite relationship with Black Town, which was now the city’s central business district.

Basu (1999) writes that people tended to have narrow spatial identities associated with these traditional villages or small town centres or various quarters of Black Town. In other words, the loosely segregated zones were comfortable and inviting. In his study on Madras (see Appendix 1, page 201), Lanchester (1916) marks the urban land based on the racial groupings of the space, like Brahmins, other Hindus, Eurasians, Europeans and Muslims. People chose the spaces, based on their social context. For the rich and dominant mercantile classes, it was George Town; for traditional Brahmin elites and itinerant traders, it was the temple spaces; for the weaver caste, it was mostly the new towns. Therefore, the city welcomed everyone with an assigned space for them, that was the city of Madras by 1800 and later. Whether it was by class or caste settlements, the dominance of the temple in the urban landscape is witnessed in all these cases.

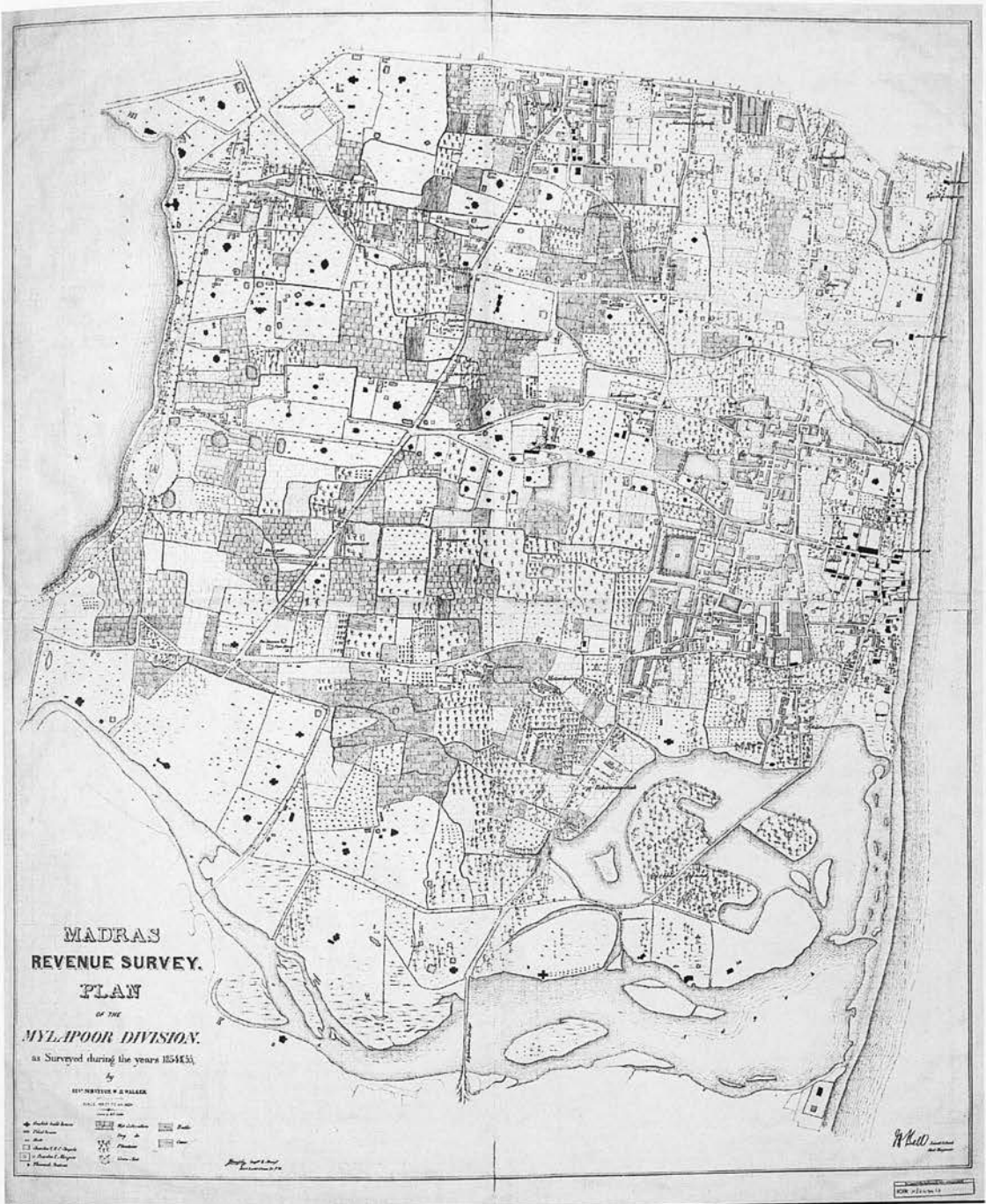
From Figures 4.10 and 4.11, and as mentioned above, it is clear that the temple locations of Chennai city definitely had an urban expansion and demographic concentration during the British period. It should also be noted that such an urban phenomenon happened in two ways, i.e., the urban concentration grew more in the temple locations and the urban sphere had more groups building their own temples during the British phase. Either way, the settlement supported and was associated with its own temple. One more interesting point is that in the traditional temple, it is the deity that acquired a solemn, heroic status;

whilst in the new community temples, the locally dominant person was seen as a *raja* by his caste or community. Mines (1996: 70) explores of the present Central Business District (CBD) of Chennai city, George Town and finds that during the British period the processional routes of the temple-cars connect the residences of the caste headmen (*ejamaan*), who controlled 'a big-man centred galaxy of ritual institutions'. Basu (1999) concludes that it is the perception of Madras as a place emerging from and belonging to its indigenous surroundings and not from the East India Company's laws, government or power that would be the key to its future authority as the new capital of south India.

**Figure 4.10 Map of Madras published in 1859**



**Figure 4.11 Mylapore Division in 1855**





## Summary

In the British period, Chennai emerged as a city. The city was neither British nor Indian in its organisational principles. The temples faced a change in their role and social context, due to the political ideology that shifted from the religious to the secular. Nevertheless, Hindu society still had a spatial identity relating to the temple and the merchants still had their social dominance established through the temples. The temple locations, old or new, continued to be the urban spheres of concentration.

### 4.3 The post-Independence period (1947 onwards)

Whilst the ceremonial cities are compact with a clearly defined central point, contemporary Chennai has dispersed zones within (Gupta, 1999: 249). George Town became the Central Business District (CBD) and the temples were invariably in the midst of the CBD. The temples, during the British period, were associated with belonging to the dominant merchant community who had a closer alliance with political ideologies. As the economic conditions and sources of power changed after 1947 and scientific and technological advances had an impact on industry and commerce, globally, the temple's political, economic and social role decreased in importance. All over India, the temple retained its role as a centre of worship and pilgrimage. The enormous lands and other properties associated with it came to be entrusted to important people in its locality, under the strict control of government bodies such as the Hindu Religious and Charitable Endowment Board (Champakalakshmi, 1999).

The concept of temple control by the socially elite group no longer continued, as it was the class system that superseded the caste system of the Tamils. However, for centuries the temples had been a key focus and landmark and this helped to keep their traditional character alive and ensured they retained their cultural symbolism for society. Thus, secular activities occurred outside the temples, yet were kept close to the temples (Champakalakshmi, 1999). The temples were and are the land magnets for most socio-economic organisations. Spodek (1980) concludes that even though it no longer dominates the cityscape nor provides the chief rationale for the existence of the city, the temple does continue to play a prominent role in the form and function of even the most modern cities in India.

Hancock's (2002) work focuses on contemporary perceptions and situations of the temple and its spaces like tanks and streets. She argues that the Hindu temples are sites on which pasts are imagined, encountered, and deployed in a variety of ways - bodily practices, prayers, mythic narratives, iconic images and that these are the media for vernacular expressions of modernity. Modernity, here, implies a complex, de-centralised and vernacular system and therefore, challenges the presumption that it implies the universalisation of secular modes of thought and action.

Hancock (2002: 7) describes two levels of relationship of the temple to its social spaces, namely, the relationship to the state and to the daily user. The former, she explains is a relationship based on British and post-British state administration of the temples, as well as the state's appropriation of ritual templates in political ceremony. The adaptation of the temple's spatial logic and ritual practices into the planning of the ceremonial places of politicians' tombs and the unplanned development of the temple spaces were critical to the post-British state. The latter relationship involves the daily user's embodied memories, desires, and practices that, in the context of temple ritual, constitute the grounds of the formation of personal and collective identity. Hancock explains the aspects of caste and temple-related-use, based on landscapes of the past which are still in the memories of urban society. She refers to collective life, publicity and 'vernacular modernity' that have been negotiated through temple practice and in temple spaces contemporaneously. In her conclusion, Hancock (2002: 26) suggests that these sites of somatic citizenship may offer starting points for thinking through a vernacular modernity that takes seriously the presence of religiosity in public life and governance.

Appadurai (1978: 343) concludes that both the architecture of the temple and the ritual drama which occurs within it suggest that the last two centuries (of British rule) have not altered the indigenous conception of the temple as a royal abode enshrining a paradigmatic sovereign, therefore, the temple continues to be conceived of as a "sacred" space, as it has been throughout history. Although the temple authorities are fragmented, the deity, conceived as a paradigmatic sovereign, continues to be a powerful repository of authority and the temple continues to attract donors, inspires awe and commands the interest and the sentiments of a large body of worshippers. With the founding of the Hindu Religious and Endowment Board (HR&EB) in 1951, the consequences of British rule became apparent (Appadurai, 1978: 338). Temple control was no longer to be in the

hands of the community but that of a state organisation called the Hindu Religious and Endowment Board (later renamed the Hindu Religious and Charitable Endowment Board, HRCE).

Today, the HRCE controls and administers various schemes of activities from everyday worship to immovable properties of over 36,000 temples in the Tamil Nadu state. It focuses on the 19 activities (<http://www.tn.gov.in/citizen/HRCE.htm>) of serving noon meals everyday for poor and disabled people, spiritual and moral classes on Sunday afternoons, fundraising for temple maintenance and renovation, maintenance of orphanages, old-age-homes, medical dispensaries, cottages and educational institutions, conducting free-marriages for the poor, upkeep and appointment of temple employees, caring for the temples' animals, important temple festivals and *e-poojas* and communication through a monthly magazine (*Thirukoil*) and the temple websites. The HRCE allocates the funds raised by the temples for the periodic maintenance of most of the temples.

The temples and their locations need specific cultural understanding in order to have a balance between conservation and everyday use by the public. Upkeep and maintenance of the temples need attention to be given to the deterioration of the buildings themselves and the urban squeeze of their locations. In other words, it is essential to understand the temples' architectural and urban levels of sustainability. On the one hand, the technical details and austere use of building materials form a central focus and on the other, an understanding of the urban locations of the temples with regard to socio-spatial contexts is important. Any planning implementation based on an understanding of the urban factors would be beneficial to both the city, its people and to the temple buildings



## Conclusion

Chapter 4 explored the historical development of the temple's socio-economic, religious and political importance and how such associations spatially could be related to the temple's economic activity. The changing social roles of the temple throughout history are listed in Table 4.8, which also summarises the key social and spatial contexts of the time. There was always a strong connection between the roles of the temple and the urban landscape – irrespective of whether temple urbanism had been necessarily followed or not. The spatial role of the temple is as continuous as its social roles.

Hindu temples have had historically, definite relationships with trade and commerce and as such, they have been the repository of religious and socio-economic values. This factor of continuity throughout the history of the temple and its association with economic activity is socially meaningful and not merely a spatial happening. Socially, the role of the temple today has reverted mainly to its origins, i.e., as a place of worship. However, at times, the temples have had various meanings and several shifts of role in the urban form, which have taken a temple location from a riverside, for example, to its being at the centre of a human settlement or city.

The importance of the temples spatially, changed throughout history. At first (the pre-British phase) secular activities were held well inside the temple and later (the British and contemporary phases), outside but close to the temples. During the pre-British period, the temple was the ceremonial centre of a settlement and during the British period, it was still socially valid but spatially, it had mostly become an object on a bustling urban street. In the pre-British city context, the temple was the dominant centre of its settlement, at the inter-city level, the trading routes connected the temples. In the British period, the temples were intentionally built on busy commercial streets and at market places and became urban locations for merchants. It can be concluded that the association of the temple with economic activities started as purely a socio-economic affiliation and later, as the social contexts underwent several changes, they became spatial expressions.

Spatially, the evolutionary pattern of the land use around the temple locations can be characterised as: a) the temple was built close to a pool or river, b) the temple, when built in the midst of a settlement, the temple tank replaced the pool, therefore giving space for

both God and humans to live in and around the temple, c) the socially stratified or *varna*-based human settlements had their residential development around the temple, d) the dominant socio-economic caste took over a prime space near the temple (*thirumadaivilagam*), e) the East temple-car street or the *Sannidhi* street had retail shops selling temple offerings, f) the temple street housed the dominant socio-economic class of the British period, and g) the temple location was the focal point as a market place for the residential quarters of dominant business groups. The trade routes of the pre-British period are also an important factor in the temples' history. The trade routes connected the temples, as almost every settlement had the temple at its centre. The significant characteristic of a temple as a focus of urban development was changed by political ideologies.

**Table 4.8 Shifting roles of the temples and the relationship of the temple and economic activity**

Period	Roles of the temples	Social aspects	Spatial aspects
<b>Pre-British period (500 BC – AD 1600)</b>			
Early period (500 BC-AD 600)	<ul style="list-style-type: none"> <li>Place of worship</li> <li>Religious institution</li> <li>Symbol of power and authority</li> </ul>	<ul style="list-style-type: none"> <li>Raise of Brahminical Hinduism (600 BC)</li> <li>The Gupta period saw the royal patronage</li> <li>Agrarian based economy</li> </ul>	<ul style="list-style-type: none"> <li>Occurrences are mostly in northern India</li> <li>The golden period for temple architecture</li> </ul>
Early medieval period (AD 600 – 1200)	<ul style="list-style-type: none"> <li>More evident ritual and scholarly institution</li> <li>Political and economic symbol</li> <li>Repository of inscriptional records</li> <li>The precinct comprised educational institutions, hospitals and religious texts</li> </ul>	<ul style="list-style-type: none"> <li>Continued royal patronage</li> <li>South Indian Temple Development by the rules of the Pallava empire (AD 600-850) and the Chola empire (AD 850-1200)</li> <li>Agrarian and guild trades serving public and royal needs respectively.</li> <li>Local merchant guilds had monopolistic power: they managed the temple finances, land taxes for the state and local political administration.</li> <li>Development of irrigation technology and farming methods.</li> </ul>	<ul style="list-style-type: none"> <li>Emergence of temple town</li> <li>Irrigation networks determined the spatial location of the temple</li> <li>Temple concentric layout</li> <li>This period met tremendous innovations in temple architecture, both structural and stylistic (<i>vimanas</i>, <i>gopuras</i> and modest enclosures)</li> </ul>
Late Medieval Period (AD 1200–1600)	<ul style="list-style-type: none"> <li>Centres of agricultural layouts</li> <li>Economic centres</li> <li>The temple was an effective space both in rural urban - for the emerging complexity of social organisation.</li> </ul>	<ul style="list-style-type: none"> <li>Dramatic change in regional and long-distance economies, and political organisation</li> <li>Urban and agricultural expansion have been linked to Hindu temples</li> <li>Agrarian + merchants serving royal and common people's needs + crafts</li> <li>Temple economies and their varied roles in agriculture, politics, ritual, craft production, and investment, particularly under the expansion.</li> </ul>	<ul style="list-style-type: none"> <li>Temples occupy strategic locations on the trade routes</li> <li>Dramatic change in settlement dynamics – major urban concentration at temple locations.</li> <li>Urban topography of the cities developed in direct response to royal patronage and religious leanings.</li> </ul>
<b>British period (AD 1600 -1947)</b>			
Early Modern Period (AD 1600-1800)	<ul style="list-style-type: none"> <li>From political to religious</li> </ul>	<ul style="list-style-type: none"> <li>The beginnings of the sustained European involvement in South Asian markets</li> <li>An unprecedented expansion in the volume of international exchange and trade</li> <li>Various themes emerged: (i) urbanisation and related transformations of settlement; (ii) monetisation and the increasing role of production for markets; (iii) the intensification of production; and (iv) the shifting roles of temples</li> </ul>	<ul style="list-style-type: none"> <li>Changing religious landscape</li> <li>Emerging new temples located on the busy urban districts.</li> </ul>
The Modern, High Modern and Post Modern Periods (AD 1800 onwards)	<ul style="list-style-type: none"> <li>Political, economic and social role decreased in importance</li> <li>A centre of worship and pilgrimage</li> <li>Cultural symbol</li> <li>The landmarks and magnets</li> </ul>	<ul style="list-style-type: none"> <li>Changing economic conditions and sources of power (British), globalised science and technology and industrial and capitalist instruments of change</li> <li>Enormous lands and other properties came to important people of its locality, under the strict control of government bodies such as Hindu Religious and Charitable Endowment Board</li> <li>Centuries of continuous domination enjoyed by the temple in society has helped to keep its traditional character alive.</li> <li>Trade: international trade and global economy</li> </ul>	<ul style="list-style-type: none"> <li>The secular activities (commercial and societal organisations) started keeping outside the temples, yet with the phenomenon of keeping proximity to the temples.</li> </ul>



Socially, traders symbolised their identity by building and supporting a temple at the centre or at a prominent space in their settlement. In the pre-British period, they created a temple in their new settlements and followed the typical spatial planning of the temple locations in that pre-British period. During the British period, traders mostly tried to 'mimic' the kings of their past by building a temple reflective of their own identity and by offering donations to the temple, therefore, the association of a temple as a trader's landmark was continued even in the British period.

There was continuity in the alliance between the temple and economic activities: these alliances varied from the king-merchant relationship to the portfolio capitalists of the late 17<sup>th</sup> century through the caste network. This social process had its impetus in political, economic and religious refinements and retained its hold as an established cultural idiom. This was evident in the merchant class association with temple donations; this aspect continued even in the British period. The temple remained as a place for communicating with colleagues and conferred a social status on temple donors, especially relative to the size and quality of those donations. The relationship between the temple and economic activity, apart from the clear socio-religious aspect, was mainly socio-political during the pre-British period and a perceptive one during the British period.

# Chapter 5

## Spatial study

### 5.1 Case-study temple-locations



**Figure: 5.1 Case study temples' locations**

The researcher identified all the city temples that have tanks, (36 in total) as the case-study temples (see Figure 5.1) for the following reasons: a) these temples are mostly historical and therefore, were classified as 'important temples' in the 1961 Census b) these temples have a minimum cluster of four streets relating spatially to the temple

because of the tank’s presence and c) these temples are located in diverse city locations and have various degrees of retail activity around them (see Table 5.1). The retail activities are of three types and can be classified according to ‘scales of retail activity’. The case-study temples on the first, second and third scales have high, medium and low intensities of retail activity around them, respectively. Scale-1 case-study temples have more than one commercial street with more than 80% of the street frontage with retail development on the ground-floor level. The scale-2 case-study temples have one commercial street with 60-80% of the street frontage with retail development on the ground-floor level. Scale-3 case-study temples have less than 60% of the street frontage with retail development on the ground-floor on one street. Of the 36 case-study temples, the distribution of retail activity scales is listed in Table 5.1 (see also Appendix 2.1, pages 202 & 203, for details about each temple).

Table 5.1 Case-study temples and the three scales of retail activity		
Scales of retail activity	Number of cases	Percentage
Scale 1	13	36.1
Scale 2	15	41.7
Scale 3	8	22.2
Total	36	100.0

## Section 5.2 The city-level study

### 5.2.1 Space Syntax – the Axial map (Axman)

Space Syntax is a set of techniques for the representation, quantification and interpretation of spatial configuration in buildings and settlements (Hillier *et al.*, 1987: 363). The cornerstone of the space syntax methodology is a simple mathematical/graph theory procedure, intended to analyse plans to arrive at cultural norms behind their morphology. The axial map may be represented as a graph consisting of nodes representing axial lines that need to enter all convex spaces and links representing the intersection of axial lines. Axial analysis provides an appropriate way to make and analyse the spatial models of cities, by drawing a network of axial lines. Configuration is defined as general as, at least, the relation between two spaces taking into account a third, and at most, as the relationship among spaces in a complex, taking into account of all the other spaces in the complex.



The theory of 'space syntax' is that it is primarily, though not only, through spatial configuration that social relations and processes express themselves in space (Hillier et.al., 1987: 363). Space Syntax software analysis determines the relative depth value of each line with respect to all other lines of the system and creates an analysed map which shows the relative 'integration' of each street in the city. Axial analysis is able to give these integration values at both a global level (integration of each street to all other streets of the city) level and a local level (integration of each street to the next two or three streets) and to correlate them to each other, or to other spatial factors, like control value, intelligibility and connectivity.

Two important papers of Hillier's explain the movement economy (Hillier, 1996) and centrality (Hillier, 1999b) theories. The movement economy theory is that movement flows in different parts of a street network and is systematically influenced by the spatial configuration of the network itself. The theory proposes that evolving space organisation in a settlement first generates movement patterns (attraction theory) which then influences land-use choices, and these, in turn, generate multiplier effects on movement with further feed-back on land-use choices and the local grid as it adapts itself to more intensive development (Hillier, 1996: 43).

In his paper (1999b: 06.9) *Centrality as a process*, Hillier explains 'live centrality' as the element of centrality which is led by concentration of retail, markets, catering and entertainment and other activities, in other words 'the places of economic competitiveness' as Madanipour (2003) puts it, which usually benefit from movement. Hillier suggests that configuration generates attraction and the appearance of attraction-inequalities in urban surfaces can be accounted for by the spatially-driven movement economy process. Finally, Hillier proposes that centrality is a process that works through the impact of spatial configuration on movement and the subsequent influence this has on land-use choices, and the development of the area as an 'attractor' in the settlement layout as a whole.

Besides giving credit to the technique, the paper by Osman and Suliman (1994) discusses its major shortcomings: the Western cultural element in the calculation of the shortest path; the limitation of the inherent binary coding; and the inability of the method to stand by itself for any social meaning and hence the necessity to complement its findings with

socio-cultural research. Their paper goes beyond the aspect of criticism and proposes solutions.

Interestingly, the third conclusion of Osman and Suliman's (1994: 10) publication concludes that the Space Syntax methodology alone is incapable of eliciting the cultural norms of societies governing the use of building; it should be supplemented by social science methods. The work of Salheen and Forsyth (2001: 101) also went beyond the aspect of criticism and developed a resultant model called Metric Axial Model to address distance in the space syntax syntactical model.

This thesis adopts a fundamental theory of space syntax that the configuration is basic to the urban spatial process, both globally and locally. An Axial Map study of Space Syntax was undertaken. The spatial meaning was studied through land use, as Hillier suggests, at the city level and in local contexts. The aspect of distance is an insight from the study of urban space in three levels; namely, the city level covers the city's extent, the local level covers a 600m radius from the case-study temples and at the street level, it covers the case-study temple streets.

### **5.2.2 Space Syntax and the city**

Space Syntax studies were undertaken both in the city and local contexts investigations. The city context is discussed first; the local context discussion follows later in this chapter. The street structure of Chennai city consists of the central orthogonal core of George Town, a British planned district, and a few very long and radial roads which connect this core to the periphery. The city mostly has non-orthogonal grids, covering an area of 172 square kilometres, with a broken line structure, since every road does not cross over the canals, rivers and railway lines of the city.

Table 5.2 shows that compared to other parts of the world, Indian cities seemingly, have lower syntactic values. A Space Syntax study on Ahmedabad city (Raman, 2003: 74.8) showed that the city has lower connectivity and integration values, which are attributed to its non-orthogonal grid, which naturally growing cities have. In previous studies (Hillier *et.al.*) it was found that British cities tended to disintegrate in terms of global integration when they grow bigger (Hillier, 1996). Chennai city has also lower connectivity and

integration values, which is due to the non-orthogonal grids, larger area coverage and a broken line structure.

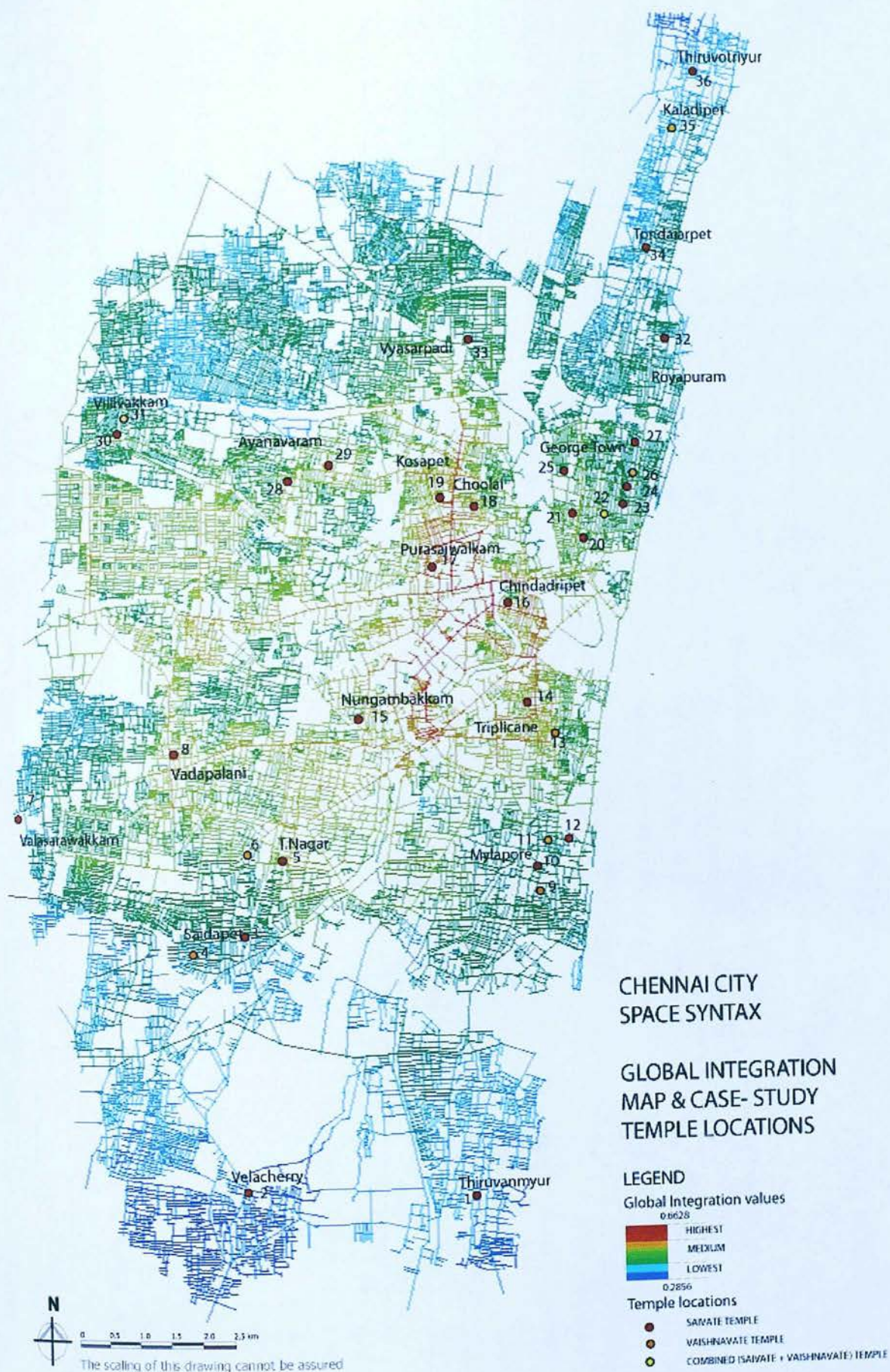
<b>Table 5.2 Syntactic values of the various parts of the world</b> Source: (Source: Raman, 2003: 74.8 and the author)						
	Number of cases	Connectivity	Local	Global Rn	Intelligibility Rn/Conn	Synergy Rn/R3
USA	12	5.835	2.956	1.610	0.224	0.559
UK	13	3.713	2.148	0.720	0.124	0.232
Middle East	18	2.975	1.619	0.650	0.231	0.160
India	2	3.104	1.674	0.633	0.129	0.245

### 5.2.3 The city, syntax and the location of the case-study temples

The Anna Road, one of the radial roads out from George Town, is the most globally integrated road (see Table 5.4). The streets in the areas of Nungambakkam, Chindadripet, Purasaiwalkam, Choolai and Triplicane form the highly globally-integrated core of the city. Whilst the streets that connect this core to the areas of Mylapore, Villivakkam, Vysarpadi and Royapuram are medium-integrated ones, the streets that connect to Thiruvannamur, Velacherry, Saidapet and Thiruvettriur are low-integrated ones. Tables 5.3 and 5.5 show the locations of the case-study temples respective to the low/high/medium integration values.

<b>Table 5.3 The case study temples and the syntax values</b>		
Level of global integration values	Number of case-study temples	Percentage of the whole of the case-study temples
High	8	22.2
Medium	21	58.3
Low	7	19.5
Total	36	100.0%





**Figure 5.2 Chennai City – The global integration map and the case study temple locations**

**Table 5.4 Grouping of the major city streets, based on global integration values**

S.No.	Level of Integration	Name of the major roads
1	High Global integration values between 0.5686 to 0.6628	Anna Road (Mount Road), Punamallee High Road, Mint Street, GN Road, Pantheon Road, Purasaiwalkam High Road, Perambur Barracks Road, NSK Road, Usman Road, Walaja Road, Pycrofts Road, Duraisami Road, Jawarharlahl Nehru road and the 2 <sup>nd</sup> , 3 <sup>rd</sup> and 6 <sup>th</sup> Avenues of Anna Nagar.
2	Medium Global integration values between 0.41763 to 0.5685	Rajaji Road, Suryanaraya Road (Royapuram), TTK Road, Luz Church Road, Mandaveli Road, Santhome High Road, Eldams Road, Thyagaraya Road, Kaliamman Koil Street (Virugambakkam), Konnur High Road, and Erukancheri High Road
3	Low Global integration values between 0.2856 to 0.41762	Sardar Patel Road, Dr.Muthulakshmi Road, LB Road, Velacherry Road, Great Northern Trunk Road, Kathivakkam High Road and Thiruvettriur High Road

**Table 5.5 Grouping of the case-study temples, based on global integration values**

S.No.	Level of Integration	Case Study temples
1	High Global integration values between 0.5686 to 0.6628	Temple 5 of T.Nagar, Temple 8 of Vadapalani, , Temple 14 of Triplicane, Temple 16 of Chindadripet, Temple 17 of Purasaiwalkam, Temple 18 of Choolai, Temple 19 of Kosapet, and Temples 20 of George Town.
2	Medium Global integration values between 0.41763 to 0.5685	Temple 3 of Saidapet, Temple 7 of Valasarawalkam, Temples 9, 10, 11 and 12 of Mylapore, Temples 13 and 14 of Triplicane, Temple 15 of Nungambakkam, Temples 21, 22, 23, 24, 25, 26 and 27 of George Town, Temples 28 and 29 of Ayanavaram, Temples 30 and 31 of Villivakkam, Temple 32 of Royapuram and Temple 33 of Vyasarpadi.
3	Low Global integration values between 0.2856 to 0.41762	Temple 1 of Thiruvanniyur, Temple 2 of Velacherry, Temple 4 of Saidapet, Temple 31 of Villivakkam, Temple 34 of Tondaiyarpur, Temple 35 of Kaladipet and Temple 36 of Thiruvettriur,



#### 5.2.4 Land use and the city

One popular comment about the land-use data is it is both spatial, in terms of physical boundaries and social, in terms of the function or activity within those physical boundaries. Since the major aim of studying the land use is to correlate the function to the Space Syntax values, the land use is included in the spatial study. The physical boundaries and the functions were studied for all the cases at city and local levels.

The land-use study was undertaken by using the Chennai City Land Use Map prepared by the Chennai Metropolitan Development Authority. The city level study (see Figure 5.3) shows that the city is a combination of all land-use models, i.e., concentric, sectoral and multi-nucleated (Rhind and Hudson, 1980): concentric, in having the Central Business District (CBD) and peripheral residential land use; sectoral, by the radial roads dividing the land-use boundaries; and multi-nucleated, in the mix of having dense multi-land use close to the CBD. The residential land use has spread everywhere in Chennai, as in any other city. The southern part of the city mostly has institutional land use and the northern, mostly industrial land use. The rivers, canals and railway lines, once again, are natural barriers or dividers of land uses. The following points show that the historical aspect of the city is a key element in deciding its land use:

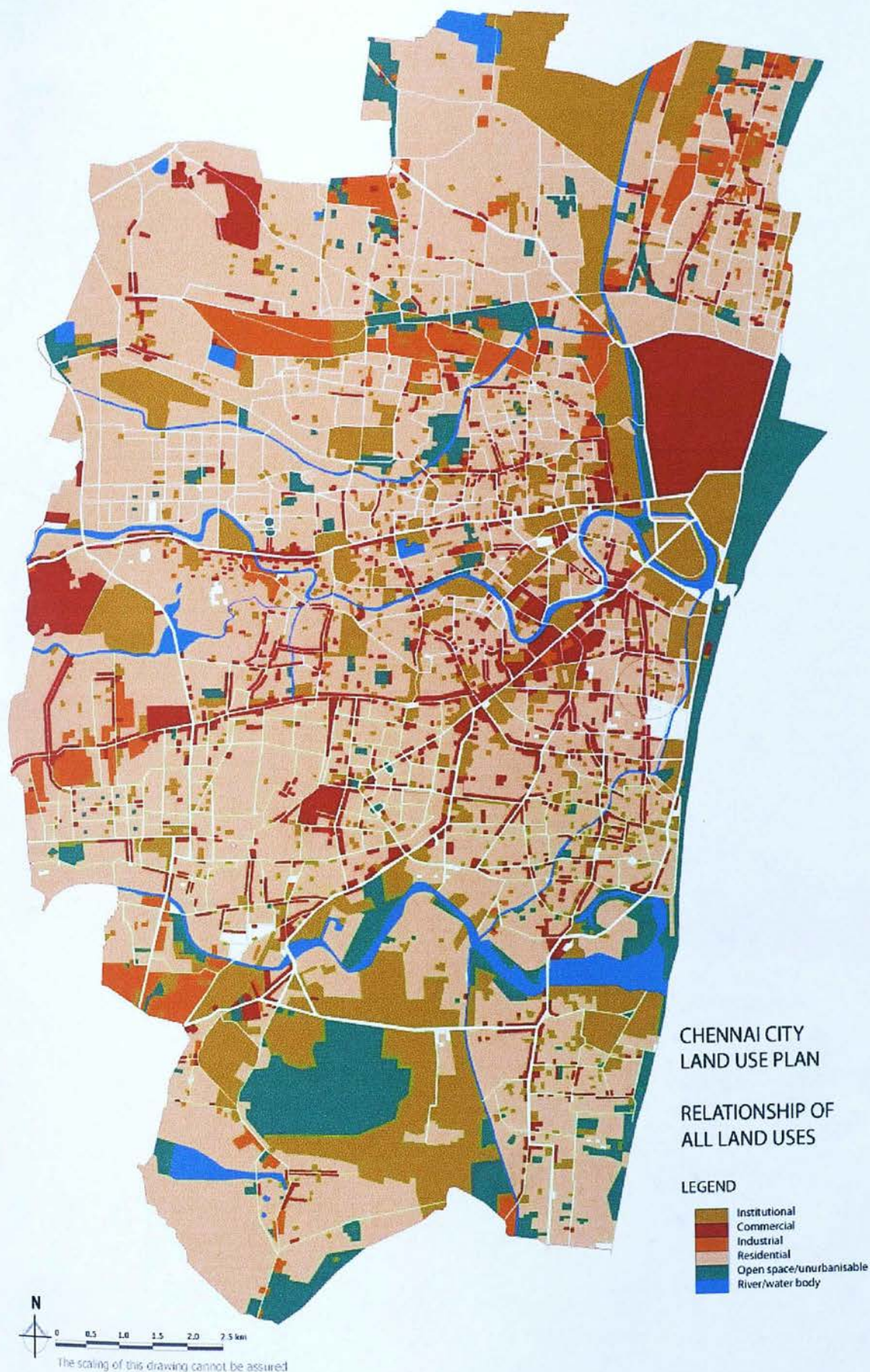
- The Central Business District – is the traditional British period settlement of Black Town.
- The zones with multi-land uses – are mostly the traditional village settlements of Triplicane, Mylapore, Thiruvananthapuram, Saidapet, Vadapalani, Purasawalkam and Thiruvettiyur.
- The main connecting commercial route is the Anna Road – historically, the first longest road laid by the British, connecting Fort St. George (official headquarters) to T. Nagar (a busy commercial node today) and St. Thomas Mount (a suburban space today).
- Most of the recently developed zones are residential, whilst the connecting streets of these zones are commercial.



Understanding the commercial land use and the locations of the case-study temples:

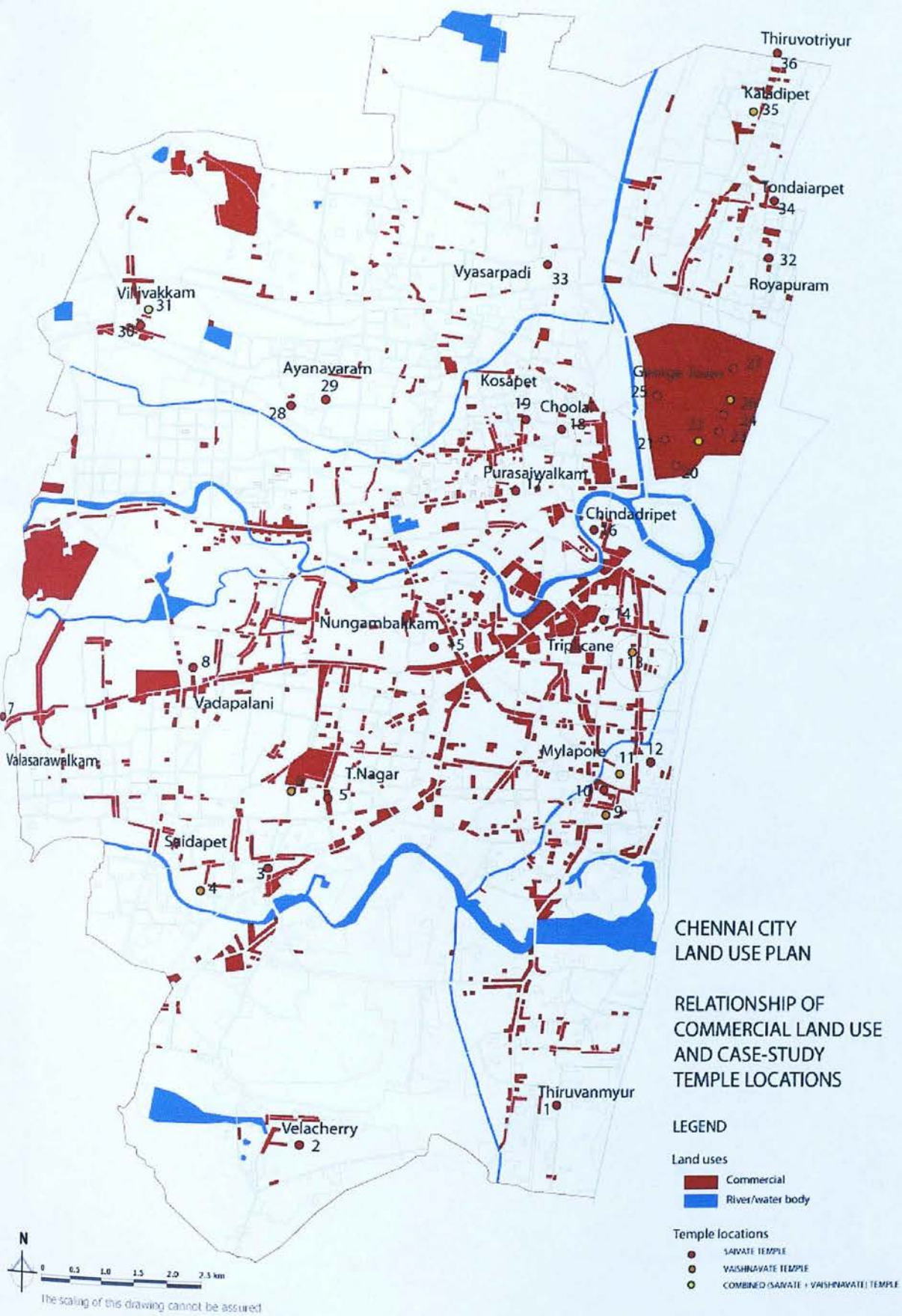
Figures 5.3 to 5.6 show that:

- The routes connecting to the historic temple locations are the main commercial corridors of the city.
- The case-study temple streets located in the CBD and T. Nagar mostly have commercial land use made of them.
- The case-study temple streets located in the multi-land use zones, typically the traditional settlements, of Triplicane, Mylapore, Thiruvanmyur, Saidapet, Vadapalani, Purasaiwalkam and Thiruvettriur, have mostly multi-land uses made of them.
- The case-study temple streets located in the residential land use zones, may or may not have commercial land use made of them.



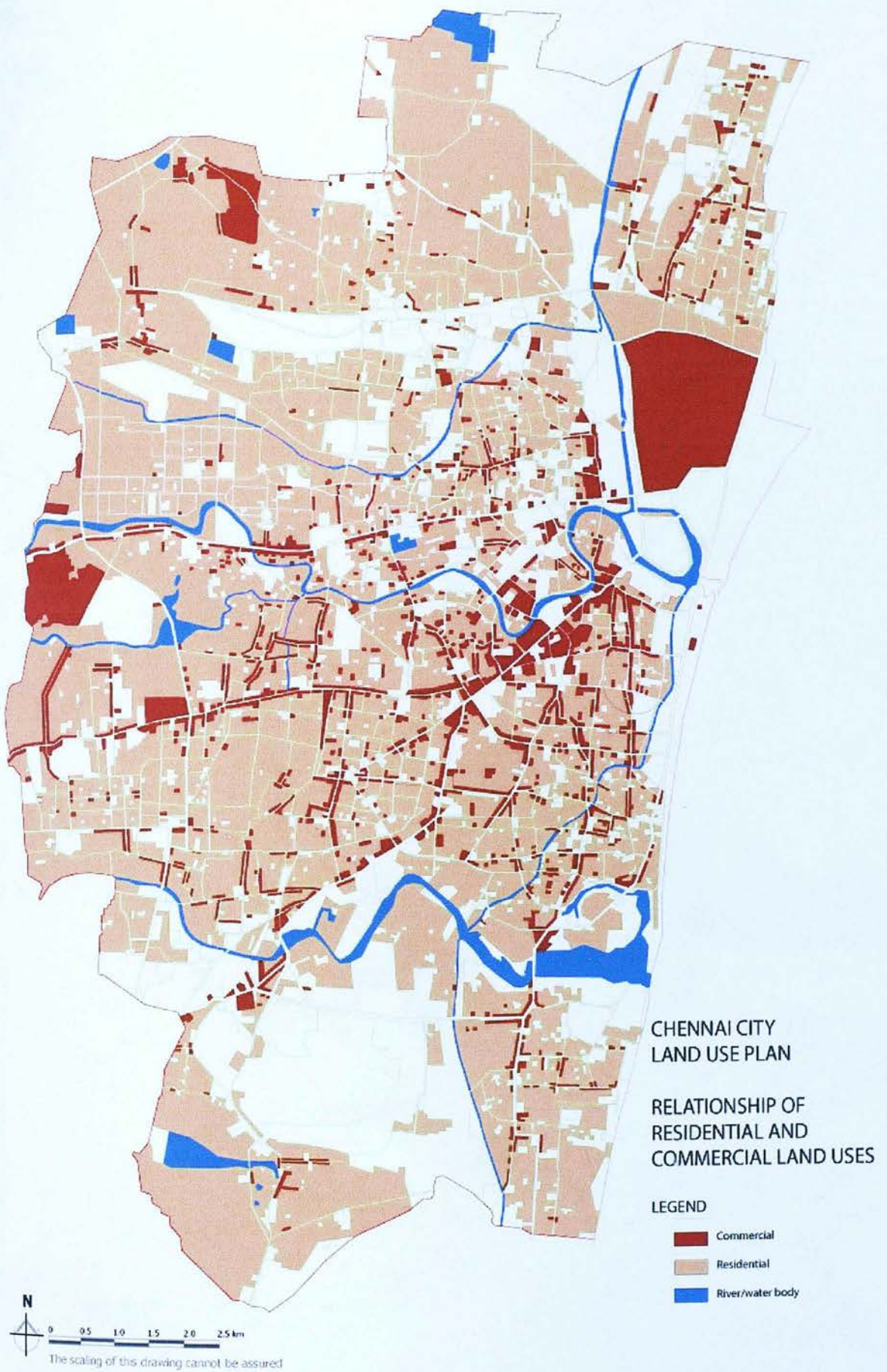
**Figure 5.3 – Chennai city – Relationship of all land uses**





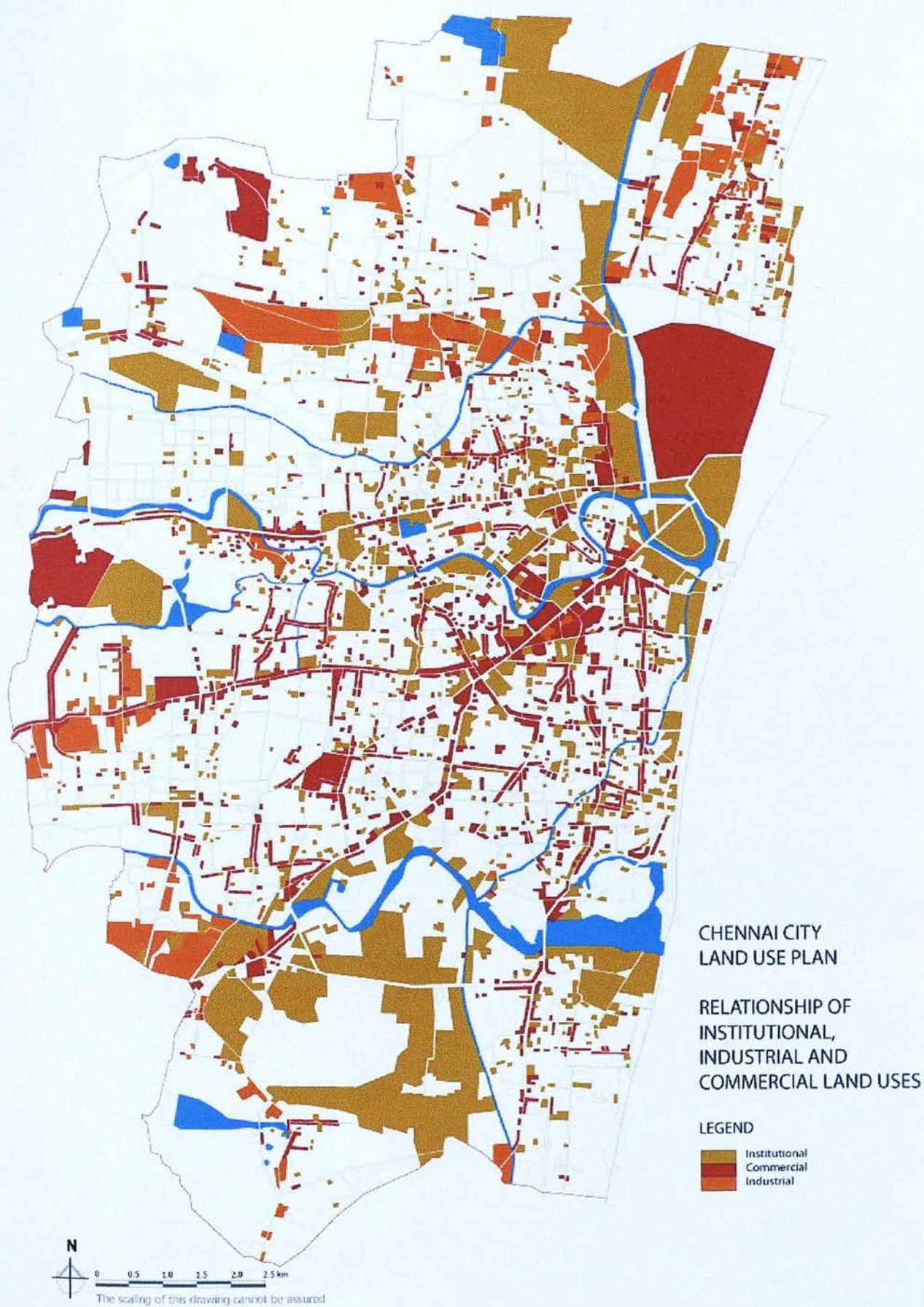
**Figure 5.4 Chennai city – Relationship of commercial land use and the case study temple locations**





**Figure 5.5 – Chennai city – Relationship of residential and commercial land uses**





**Figure 5.6 – Chennai city – Relationship of institutional, industrial and commercial land uses**

5.2.5 The temples, syntactic values and commercial land use of the city

Table 5.6 shows the following set of relationships:

Table 5.6 Global integration values and the scale of retail activity of the temples				
Scales of retail activity	Global integration values			
	High	Medium	Low	Total
Scale 1	3 (Temples 5, 8 and 20)	6 (Temples 3, 7, 10, 21, 22, and 23)	4 (Temples 1, 34, 35 and 36)	13
Scale 2	5 (Temples 14, 16, 17, 18, and 19)	9 (Temples 13, 15, 24, 25, 26, 28, 29, 30, 32 and 33)	1 (Temple 2)	15
Scale 3	0	6 (Temples 3, 9, 11, 12, 27 and 29)	2 (Temples 4 and 31)	8
Total	8	21	7	36

Surprisingly, the commercial land use of ten case-study temple streets (groups 1 and 2, mentioned below) do not co-relate with the Space Syntactic values. That is, the four temples (group 1) with low global integration values, yet with high scales of retail activity, are the temples of Thiruvannmyur (Temple 1), Tondaiyarpur (Temple 34), Kaladipet (Temple 35) and Thiruvetriyur (Temple 36). These two temples are located at the southernmost and northernmost temple settlements of the city or the outermost ring of the city, and the streets connecting to these settlements are the major commercial routes of the city (see Figures 5.2, 5.4 and 5.7). The six temples (group 2) with medium global integration values, yet with high scales of retail activity are the temples of Saidapur (Temple 3), Mylapore (Temple 10), Valasarawalkam (Temple 7) and George Town (Temples 21, 22 and 23). All these temples are located at the second or the middle ring of the city (see Figures 5.2 and 5.4) and from the land-use map, it is clear that the streets connecting these (groups 1 and 2) temples to the city's core, i.e., Anna Salai, are the major commercial routes of the city (see Figures 5.2 and 5.4). Out of these ten temples, 7 belong to the pre-British and 3 belong to the British periods.



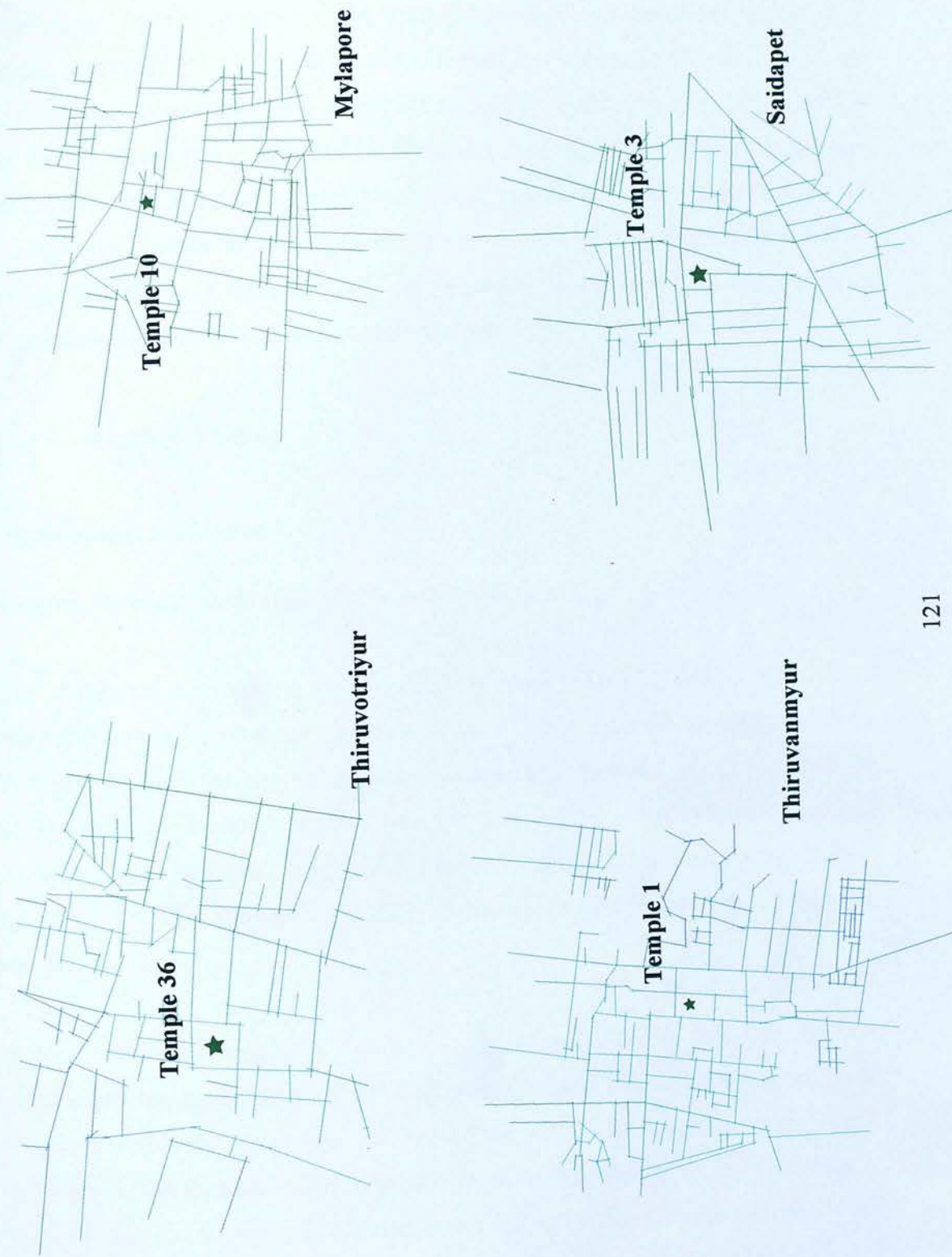
The three temples with high global integration values and high retail activity are T.Nagar (Temple 5), Vadapalani (Temple 8) and George Town (Temple 20). All these temples are located on the best-integrated parts of the city.

It is usually the case that a temple street which has medium global integration values has medium retail activity.

There is no evidence of a temple with low retail activity and high global integration values.

Very importantly, most of the temples (21/36) have medium syntactic values but varied scales of retail activity.

Figure 5.7 Space Syntax and the village temples



### **5.2.6 Summary of the city-level study**

At the city level, commercial land use follows two distinct patterns; the first is characterised by syntactic values and the second, by historic developments, that is, the commercial core of the city, the area covering George Town, Anna Road and T.Nagar, is the most-integrated core with high syntactic values. All the other commercial corridors of the city are the routes that connect this commercial core of the city to historic temple locations. The commercial land use of most of the case-study temple streets co-relates with their syntactic values but for the ten temples mentioned in Table 5.6, the three scales of commercial land use of the case-study temples mostly co-relate with global syntactic values; surprisingly, the seven historic temples do not.

## **5.3 The district-level study**

### **5.3.1 Space syntax evaluation**

#### **The temples, the local integration values and retail activity**

Because of the less connectivity of Chennai city (see Table 5.2), only a radius of 4 (rad=4) shows an integration pattern at the local level. The mean local integration value is 1.573, which is lower than that of any other cities. The orthogonal layouts of both the British and the contemporary periods have the best locally integrated cores. George Town, Anna Nagar and KK Nagar exemplify this. All the other zones vary in their configurations, i.e., they have either radial or concentric or grid-iron or a combination of all these patterns.

In the local integration map (see Figure 5.8), it is interesting to note that the best integrated streets are mostly the ones that connect the temple villages to the city centre. In the traditional worldview, the temple is situated at the centre with concentric roads around it. It is mostly the roads which connect the temple villages to the longest roads of the city which are the best locally integrated, rather than the temple streets, which are usually the last to be reached. It should be noted, therefore, that the temples are usually found located a few “depths” (usually 3, but rarely up to 6) away from the closest street with a better integration value. In other words, the longest streets of each of the traditional villages



have high local integration values; these are mostly the ones that connect the traditional villages to the globally integrated routes. Further, it is also useful to note that the majority (21/36) of the temples have medium global integration values.

The temples of George Town, T.Nagar, Purasaiwalkam, Nungambakkam and Vadapalani are directly connected by the best locally integrated streets. The traditional village temples of Mylapore, Thiruvettriur (Thiruvottiyur) and Saidapet are located on streets with low local integration values but with high retail activity around them. All the other temples vary, both in the degree of their integration values and retail activity.

<b>Table 5.7 Local integration values and the scale of retail activity of the temples</b>				
Descriptions	Local Integration values			Total
Scale of retail activity	High	Medium	Low	
Scale 1	8 (Temples 5, 7, 8, 20, 21, 22, 23, and 34)	2 (Temples 1 and 35)	3 (Temples 3, 10 and 36)	13
Scale 2	1 (Temple 30)	14 (Temples 2, 13, 14, 15, 16, 17, 18, 19, 24, 25, 26, 28, 32 and 33)	0	15
Scale 3	0	1 (Temple 27)	7 (Temples 4, 6, 9, 12, 11, 29 and 31)	8
Total	9	17	10	36

Table 5.7 shows the following set of relationships:

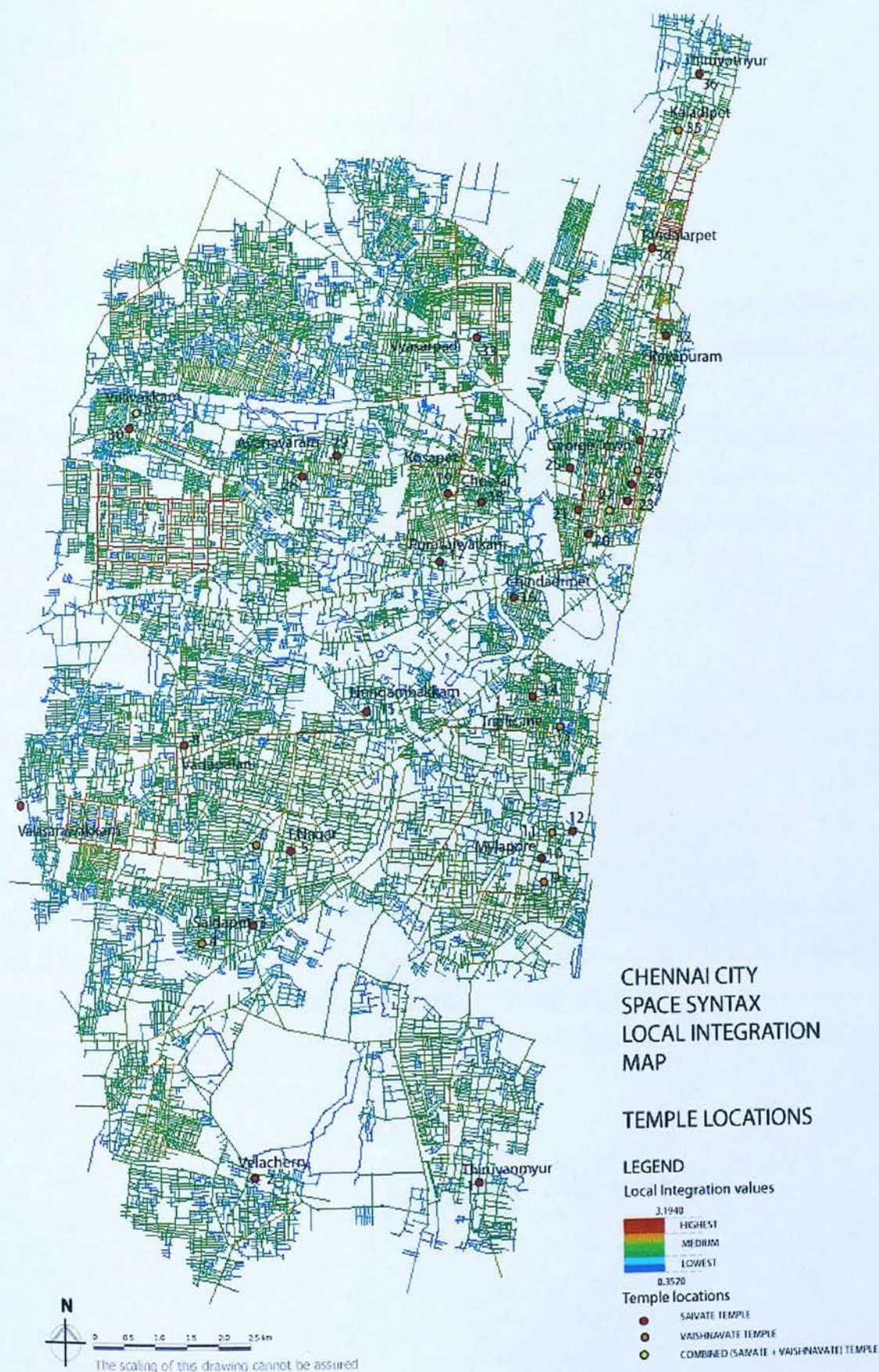
The temples of Saidapet (Temple 3), Mylapore (10) and Thiruvettriur (Temple 36) have low local integration values but high retail activity.

The temples of Thiruvanmyur (Temple 1) and Kaladipet (Temple 35) have medium integration values but high retail activity.

The temples of T. Nagar (Temple 5), George Town (Temples 20, 21, 22 and 23), Tondaiyarpet (Temple 34) and Kaladipet (Temple 35) have high local integration values and high retail activity around them.

Temples with medium integration values (17/36) have retail activity around them, but with varied scales. Most of them (14/17) are with medium integration values and medium scale of retail activity.

The lower the local integration values, the lower the scale of retail activity.



**Figure 5.8 Chennai City – The local integration map**



### 5.3.2 Local land use

Within a walking distance within a radius of 600m (Katz, 1994: xxxi) from a temple, the predominant land use has been noted for every temple location (see Appendix 2.2 – 2.4, pages 204 to 259, for details about each temple) and the findings are as follows:

- a) Where the predominant land use of the district (i.e., an area delineation of 1200m diameter with centre as the temple location) is either institutional or industrial, then it is unlikely to have a higher scale.
- b) Where the predominant land use of those regions is a mix of residential and commercial, it is more likely for the temple street to have a similar land use.
- c) Where the predominant land use of the region is residential, it is mostly observed to have lower scales of commerce.

### 5.3.3 Local landmarks

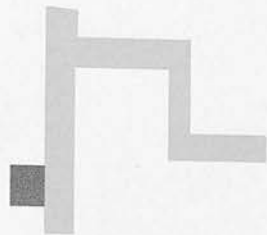
A walking distance within a radius of 600m from a temple meant that the local landmarks were fixed for the case-study temples using *Madras, The Architectural Heritage* (K.Kalpana and Frank Schiffer) and Chennai City Map (Eicher) as sources. The landmarks, which were analysed, included a local bus-terminus, railway junction, schools, social clubs, marriage halls and other temples. The findings showed that if the temple street connects to these landmarks then there is likely to be a high scale of retail activity. The converse is also true, i.e., that if there is no landmark, then there is evidence of a low scale of retail activity. Another interesting finding is that if the case-study temple street connects to another temple street, then this route was likely to have mostly a medium scale of retail activity.

### 5.3.4 The function of the temple street

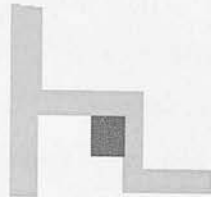
Four street patterns can be categorised, according to their hierarchy of connectivity (see Figure 5.9) a) connects various parts of the city, b) connects the major road and a local road, c) connects two local roads and d) connects to a local road and terminates at the temple.

It is evident that the two extremes of commercialisation, i.e., the high and the low scales, appear on the streets with the first (a) and last (d) functions, respectively. All the other temples in between these two extremes have various spatial patterns of commercialisation. If the road connects to other temples, then the type of commerce is likely to be mainly of temple-related activities (for example: Temples 4 (Karneeswarar Temple of Saidapet, connecting to Sivasubramanian Temple of Saidapet), Temples 37 and 38 of Villivakkam). If the road connects to a transportation node, the type of commerce is likely to be more than just temple-related activities (for example: Temples 1 Marundeesrar Temple at Thiruvananmyur), 12 (Kapaleeswar Temple at Mylapore), 10 (Vadapalaniandavar Temple at Vadapalani).

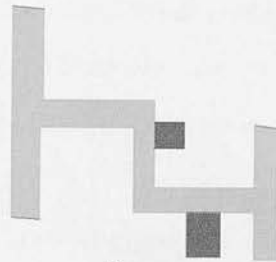
**Figure 5.9 Function of the temple street**



**Type a**



**Type b**



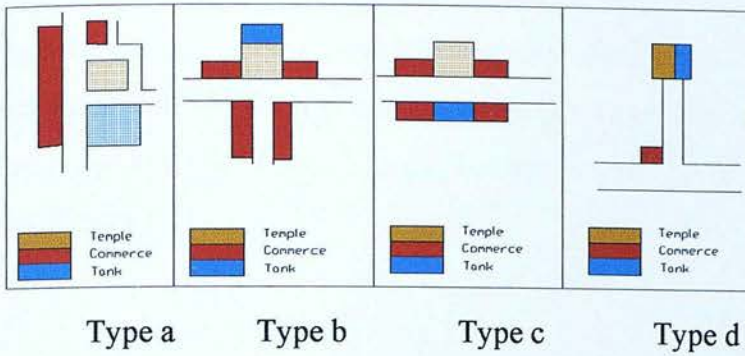
**Type c**



**Type d**

### 5.3.5 The position of the temple on the street

This aspect was considered to get an insight into the visual permeability of the temple from the street. Four street patterns were found for temple positions (see Figure 5.10): a) the temple with roads all around; b) the temple at a 'T' junction; c) the temple at the side of a road; and d) the temple at the end of the road.



**Figure 5.10 Positions of the temple on the street**

The position of the temple on the street was recorded for each of the case-study temples, according to high, medium to low scales of retail activity groups (see Appendix 2.2 – 2.4, pages 204-257, for details about each temple). Type a was found only on a high scale, Type b on high and medium scales and Type d on a low scale of retail activity.

Another significant finding is that the position of the temple on the street relates to the type of retail activity and the following patterns can be observed from the case studies:

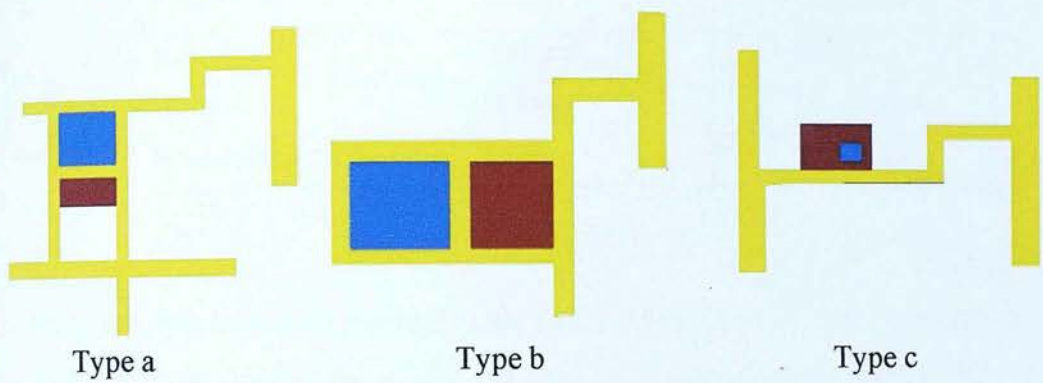
- If the temple is squared by the streets, then it is likely that the main axial street of the temple has religious retail shops.
- If the temple is at a ‘T’ junction, then it is likely to have religious retail shops on both sides of the axial street.
- If the temple is at the side of the road, then it is likely to have different retail shops on both sides of the road.

### 5.3.6 Figure-ground study

This study is significant in detailing the local spatial quality. Neither the city nor the 600m radius study does this. Interestingly, this study gives insights into both the scale and layout of retail activity, mostly with respect to the commodities sold. Urban space in this analysis, as defined by Krier (1979), is the space between buildings and in this regard, the tank is treated as an urban element that punctuates the urban space into streets.



The temple streets and tank were considered as an open space on which to draw the figure-ground study. The tank in this study is realised as an open space; in the cases where the tanks are outside the temples, the tanks sometimes punctuate the urban land into streets, and thereby, increase the number of streets relating to the temple. In the case-study temples, the positions of the temple tank are of three types, namely, a) the tanks face a main or connector roads, b) the tanks face local roads and c) the tanks are inside the temple (see Figure 5.11).



**Figure 5.11 Temple streets and the tank**

The case study temples are listed in these three groups (see Appendix 2.2 – 2.4, pages 204-257, for details about each temple) and it is apparent that the way the tank is positioned significantly affects the retail activity of the streets. The findings show that all the temples which have their tanks oriented (Type a) to the major roads, mostly have a high scale of retail activity around them; Type b mostly have medium-scale retail activity and Type c have no particularly significant co-relation with the scales.

## 5.4 Findings from the city and district level studies

### 5.4.1 Spatial typologies

There is a set of spatial relationships where the temple locations overlap with retail activity. The city-level study showed the importance of nine temples in mapping the commercial routes of the city, while the local-level study further clarified the details of the spatial relationships of the retail activity with the temples. Space syntax, land use and

figure-ground studies were undertaken for all 36 case-study temples (for illustrations see Figures 5.12 to 5.14 and Appendix 2.3, pages 240-257). The spatial characteristics which relate the temple to retail activity are of five types (see Table 5.8).

Table 5.8 Spatial typologies		
Typologies	Scale of retail activity	Spatially vibrant at the:
Typology 1	High	City level
Typology 2	High	City level
Typology 3	Medium	Local level
Typology 4	Medium	Local level
Typology 5	Low	Temple site

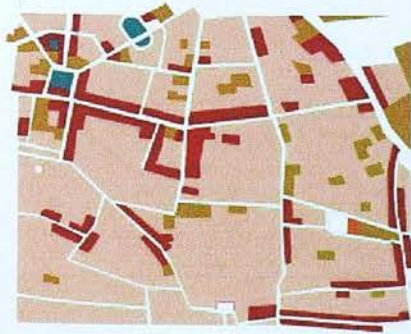
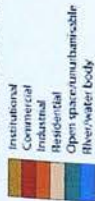
Of these five, two belong to the high scale of retail activity; two to the medium scale and one belongs to the low scale. Whilst the city-level study directly gives insight into the high scale of retail activity, the local-level study provides a detailed set of characteristics for all five spatial typologies. According to the scale of retail activity, the spatial characteristics are illustrated in Tables 5.9 to 5.12, with a brief summary below each table. Additionally, the diagrammatic representations of the typologies are illustrated in Figures 5.15-5.20. Each typology is a diagrammatic expression of its spatial characteristics, which are listed below the illustrations.



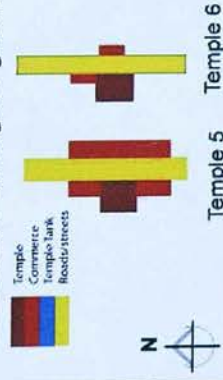
# Spatial Evaluation of the temple locations

Figure 5.12  
Location 4: T. Nagar

## A. Land Use Study



## C. Local use and figure-ground Study

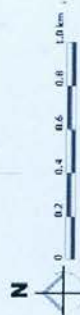
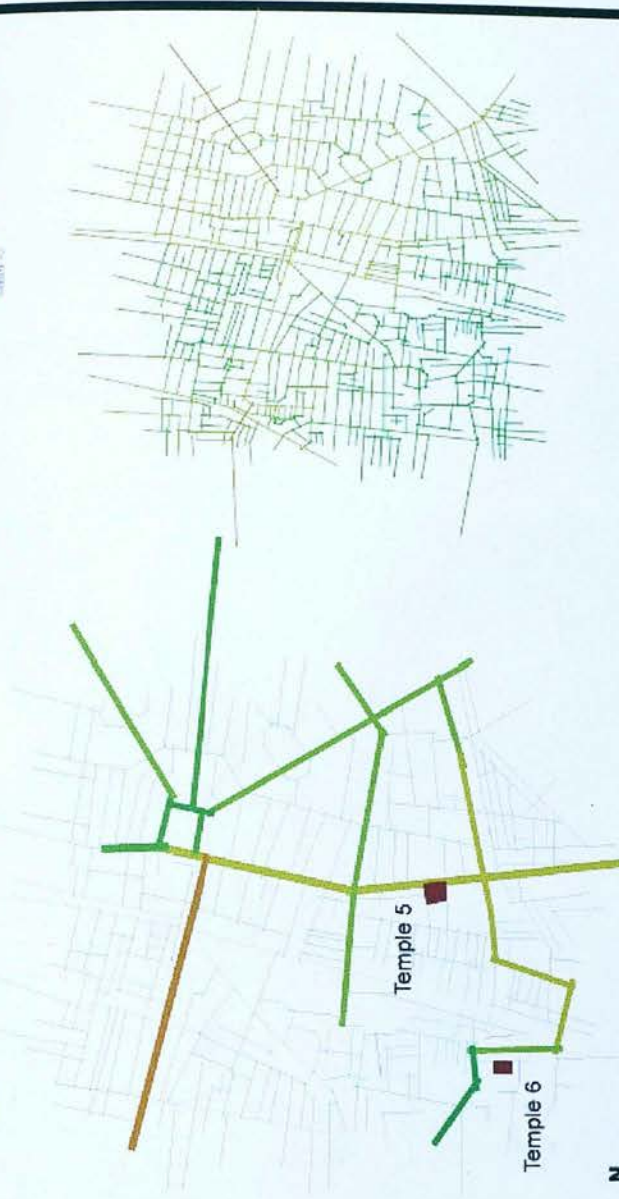


## B. Space Syntax Study

### Local Integration



### Global Integration



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East Car-street of Temple 5



East Car-street of Temple 6

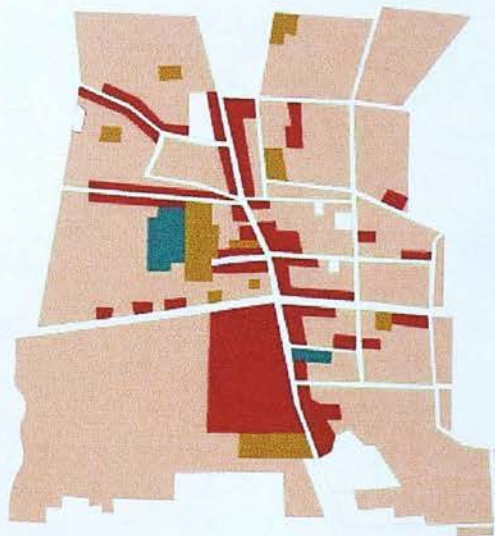
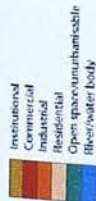




# Spatial evaluation of the temple locations

Figure 5.13  
Location 6: Vadapalani

## A. Land Use Study



## C. Figure-ground Study



Temple 8



Entrance street of the Temple 8



South and North Car-Streets of the Temple 8



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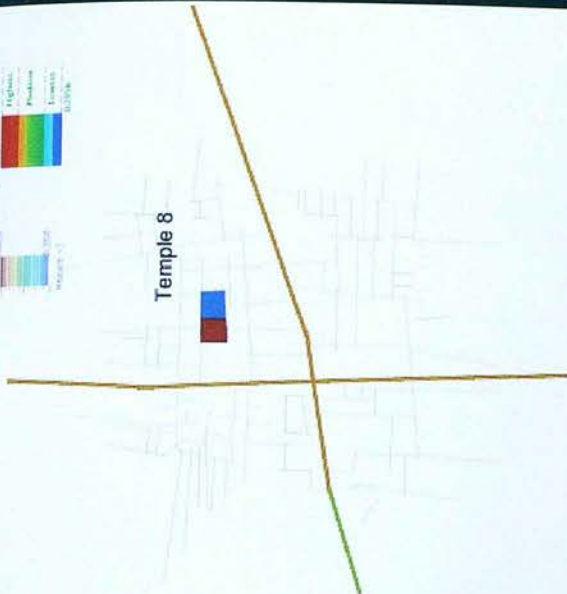
## B. Space Syntax Study

Local Integration



Temple 8

Global Integration

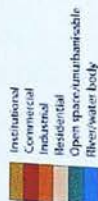


Temple 8

# Spatial Evaluation of the temple locations

Figure 5-14  
Location 7: Myslapore

## A. Land Use Study

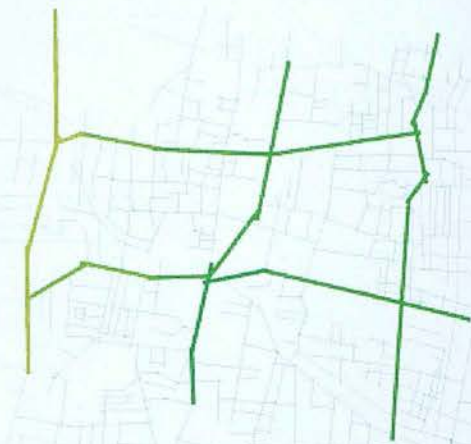


## B. Space Syntax Study

### Local Integration

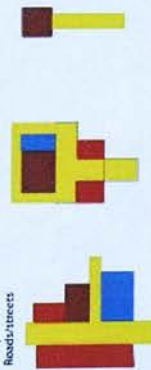


### Global Integration



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## C. Local use and figure-ground Study



Temple 10 Temple 9 & 11 Temple 12



Temple 10



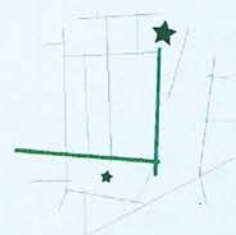



North and South Car-streets of Temple 10





**Table 5.9 Spatial characteristics - local integration values of the Space Syntax**

Spatial characteristics	Scale 1	Scale 2	Scale 3
High	Typology 2 		
Medium	Typology 1 	Typologies 3 and 4 	
Low			Type 5 

#### Discussion

Typology 1 has medium integration values, but a high scale of retail activity.


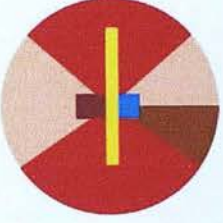
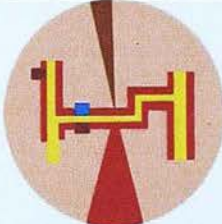
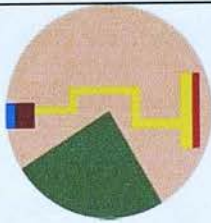
Typology 2 has high integration values, with accordingly, a high scale of retail activity.

Typologies 3 and 4 have medium integration values; and the temples are linked through the connecting commercial street.

Typology 5 has low integration values, with accordingly, a low scale of retail activity.



**Table 5.10 Spatial characteristics - district-level land use**

Spatial characteristics	Scale 1	Scale 2	Scale 3
Predominant land use – Mixed	 <p>Typology 1</p>		
Predominant land use – Commercial	 <p>Typology 2</p>		
Predominant land use – Residential		 <p>Typologies 3 and 4</p>	
Predominant land use – Residential and industrial/institutional			 <p>Typology 5</p>

#### Discussion

Typology 1 has multi-land use around the temples with a high scale of retail activity. Typology 2 has predominantly commercial land use with a high scale of retail activity.

Typologies 3 and 4 have predominantly residential land use with medium scales of retail activity.

Typology 5 has predominantly residential as well as industrial or institutional land uses with a low scale of retail activity.

Colour code: a) Red: commercial, b) Peach colour: residential, c) Brown: institutional and d) Green: industrial

**Table 5.11 Spatial characteristics - functions of the temple streets**

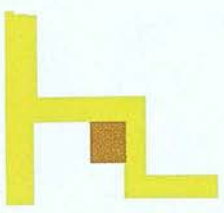
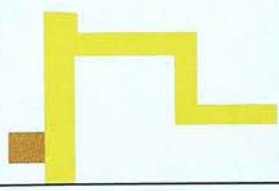

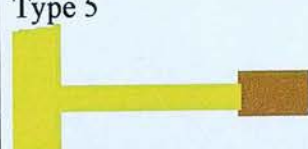
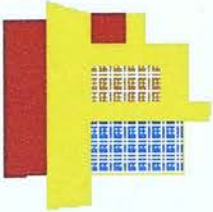
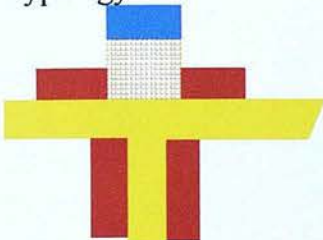

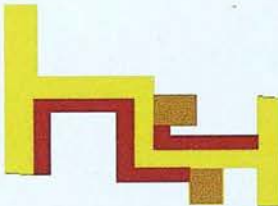
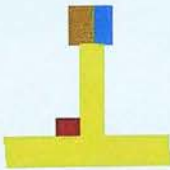
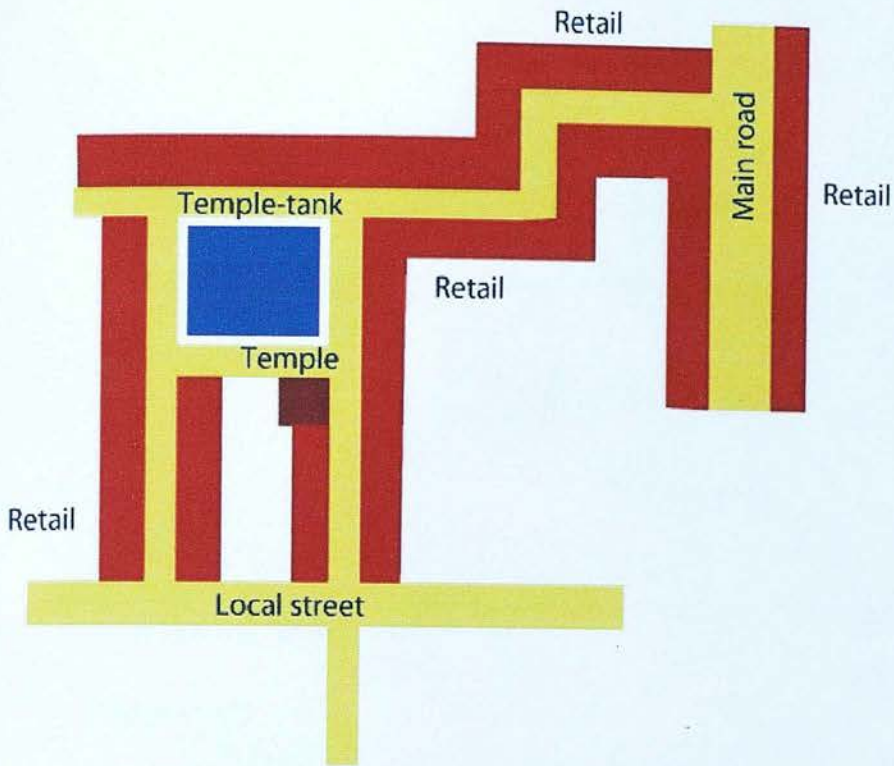
Spatial characteristics	Scale 1	Scale 2	Scale 3
Connecting major and local roads	Type 1 		
Major arterial road	Type 2 		
Connecting two local streets		Types 3 and 4 	
Connecting to a local road and ending at the temple			Type 5 
Discussion  This section of the investigation has a close relevance to the space syntax findings because there is a match between them in terms of the hierarchy of road connectivity.  The main roads are Typology 2 and have a high scale of retail activity. The next hierarchy of connecting roads to the local roads are Type 1 but still have a high scale of retail activity. The Type 3 and 4 temples, which are in between two local streets, have a medium scale of retail activity and Typology 5, which is where the street ends at the temple without any further connectivity, has a low scale of retail activity.			



Table 5.12 Spatial characteristics - location of the temple and its tank			
Spatial characteristics	Scale 1	Scale 2	Scale 3
Tank squared by streets all round	Typology 1 		
'T' junctions and tank inside the temple boundaries	Typology 1 		
On the sides and the tank is inside the temple boundaries	Typology 2 	Typologies 3 and 4 	
Ends at the temple and the tank is inside the temple boundaries			Typology 5 
Discussion:  The insights into spatial characteristics that are found in relation to this attribute are as important as those discovered by Space Syntax.  It is interesting to note that the connections of the commercial streets are determined by the positioning of the temple and its tanks on the street.  The tank becomes an important urban element in the articulation of the commercial streets at the temple locations of the city.  This aspect also gives an insight into the organisation of the shops, based on the commodities they sell. So far, the temple has a centrifugal way of organising these shops; religious commodities are closer to the temple, grocery and vegetable products, a bit away, yet closer to the temple than goods such as alcohol or meat.			



**Figure 5.15 Typology 1**



Scale of retail activities: high

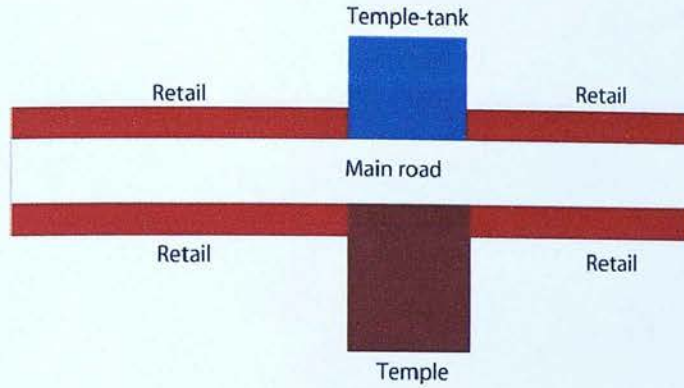
Spatial characteristics

- Mixed land use.
- Tanks facing the major streets of the locality.
- Streets connect the major arterial roads and the local streets.
- Temple is squared by streets and/or 'T' junctions.
- Presence of transportation and associative landmarks.
- Medium global and local integration values.

Case-study temples

Temple 1 (Thiruvannmyur), Temple 3 (Saidapet), Temple 8 (Vadapalani), Temple 10 (Mylapore) and Temple 36 (Thiruvetriyur).

**Figure 5.16 Typology 2**



Scale of retail activity: high

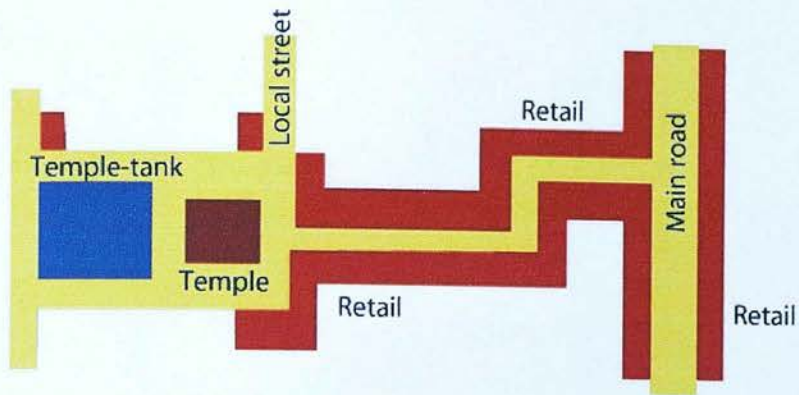
Spatial characteristics

- High global and local integration values.
- Predominant land use is commercial.
- Tanks are inside the temple premises.
- Streets are the major arterial roads of the city.
- Temple is on the sides
- Presence of transportation landmarks.

Case-study temples

Temple 5 (T.Nagar), Temples 20, 21 and 23 (George Town) and Temple 34 (Tondaiyarpet).

### Figure 5.17 Typology 3



Scale of retail activity: medium

### Spatial characteristics

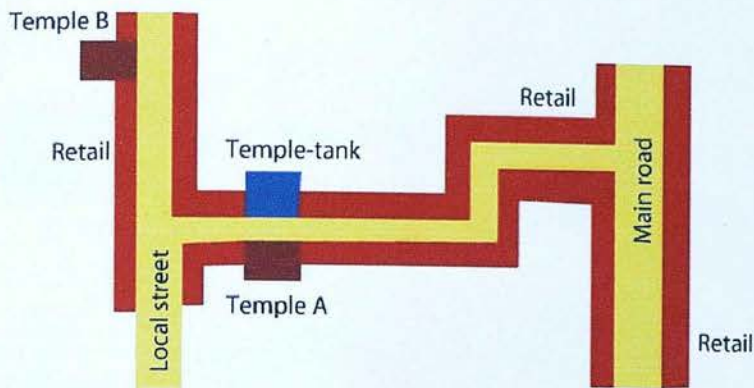
- Medium global and local integration values.
- Predominant land use is residential.
- Tanks face local streets or are inside the temple premises.
- Streets connect two local streets.
- Temple position at 'T' junctions or on the sides
- Presence of associative landmarks.

## Case-study templates

Temple 13 (Triplicane), Temple 15 (Nungambakkam), Temple 17 (Purasiwalkam), Temple 35 (Kaladipet), Temple 16 (Chindadripet), Temple 33 (Vysarpadi), Temple 19 (Kosapet) and Temple 25 (Peddanaickanpet).



**Figure 5.18 Typology 4**



Scale of retail activity: medium

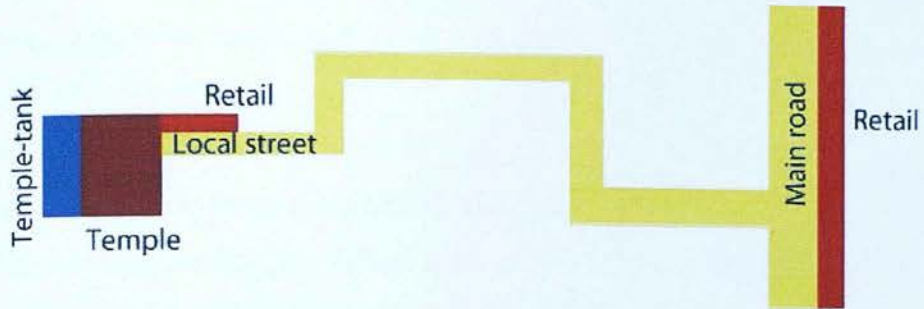
Spatial characteristics

- Medium global and local integration values.
- Predominant land use is residential.
- Tanks are mostly inside the temple premises.
- Streets connect two local streets.
- Temples positioned on the sides of the street.
- Associative temple is close by.

Case-study temples

Temples 9 and 10 (Mylapore), Temple 30 and 31 (Villivakkam) and Temple 18 (Choolai) to other local temples.

Figure 5.19 Typology 5



Scale of retail activities: low

Spatial characteristics:

- Low local and global integration values.
- Predominant land use is residential, along with industrial or institutional.
- Tank is inside the temple premises.
- Street ends at the temple.
- Absence of any associative landmark.

Case-study temples

Temple 12 (Mylapore) and Temple 27 (George Town).

## Conclusion

The findings illustrate that a temple can be related to its surrounding retail activity by using five spatial characteristics, which are found to be producing five spatial typologies amongst the case study temples (see Figures 5.15 - 5.19). These spatial characteristics are listed in descending order of priority:

### A. The location of the temple and tank on the street

It tends to be the case that the highest scale of retail activity occurs when the tank is outside the temple facing the major roads of a locality and when the temple is located at the intersectional node of the streets (either a 'T' junction or 'squared by streets') (see Figures 5.10 & 5.11 and Table 5.12). Conversely, the lowest scale of retail activity occurs when the tank is located inside the temple and the temple is located at the end of a street.

### B. The Space Syntactic values

Apart from the typology 1 temples, the scale of retail activity on the temple-streets tends to have a direct co-relation to the global and local syntactic values of the temple-street (see Figures 5.2, 5.4 & 5.8) because the typology 1 temples' retail activity occurs, based on 1) the point mentioned in the paragraph above (A) and 2) the function of the temple-street as described below (D).

### C. The local land uses

The temples located in the CBD and in the locations of mixed-use tend to have the highest scales of retail activity while the temples located where the predominant land use is industrial and institutional, have the lowest scales. It is noteworthy that the temples in the residential quarters of the city have varied scales of retail activity (see Table 5.10).

### D. The function of the temple street

Where the temple-streets connect major and/or local roads, then they tend to have the highest scale of retail activity (see Table 5.11). This characteristic also has a close relationship with local land use, in that where the temple-streets connect the



residential layout to an adjoining major road, the highest scales of retail activity tend to occur. This is typical of the typology 1 temples.

#### E. The local landmarks

When the temple-street is connected to a greater number of local landmarks, it tends to be the case that a higher scale of retail activity occurs. It is very important to note that when a street connects two temples, the tendency is for that street to become an interesting retail route of the locality (see typology 4, Figure 5.18).

Therefore, the relative location of the temple, according to these spatial characteristics, is central to an understanding of the relationship between the temple and retail activity. Based on these understanding the chapter has also developed the typologies (see Figures 5.15 to 5.19) which are the ways of looking at spatial heterogeneity, a set of principles that show the relationship between the temple and retail activities spatially throughout the city.

## Chapter 6

### Social study

#### 6.1 The temple as a social space

Three social value systems can be noticed in the temples; the historic, administrative and religious-sect values. Firstly, the historic value of the temples can be seen as a combination of three aspects, 1) when and 2) who built them and 3) the legends or miracles that happened in the temple's legendary history (*sthala puranam*). The greater the historic values that are attached to the temples, greater the number of ways that the temple-office establishes social relationships. Almost every temple of Tamil Nadu is administered by the HRCE, which decides and administers the daily and annual processes of the temples. Thirdly, the important division of the religion, the Saiva and Vaishnava sects of Hinduism and the Tamils mostly belong to the former. With all these value systems, the temples are not just buildings, they are perceived locally as social systems.

#### Historic values

In order to understand the case-study temples in their historical context, an analysis through the Temple Directory of Madras City, Part II, 1967, data was done under the criteria of when and who built the temples. According to this information, the temples can be classified into three social types, namely: a) the temples built in the pre-British period by locals including trading community or royal communities, b) the temples built in the British period by rich merchant castes (George Town) or any caste in the locality, and c) the temples built in the British period by individuals. Clearly, the first two temple-types were built and supported by a group while the third type was built by individuals, so did not receive any great support from locals unless the builder was a locally-dominant merchant (see Chapter 4: 89).

Table 6.1 Historic periods of the temples			
	Period	Built by	Number of temples (for details, see Appendix 2.2)
1	Pre-British (type a)	Trading community	4
2	Pre-British (type a)	Royal families	9
3	British (type b)	British – East India Company	2
4	British (type b)	Locals (by a caste group)	10
5	British (type c)	Individuals	8

Table 6.2 Legends and miracles		
	Description of the legends and miracles	Number of temples (For details, see Appendix 2.2)
1	God descended once	1
2	Deities appeared and were ever-growing at the temple site ( <i>Suyambu</i> )	2
3	Deities blessed by the God Himself	1
4	Miracles by the saints	3

Another important factor is that the temples with deities, associated with historic legends and miracles attract more visitors. Five of such temples, Sri Vadapalaniandavar (Temple 8), Sri Kapaleeswarar (Temple 10), Sri Marundeeswarar (Temple 1), Sri Thygarayaswamy (Temple 36) and Sri Parthasarathy (Temple 13) temples, are popularly marked as *sthalams* or historic pilgrimage centres in the city. According, to the Temple Directory of Madras City, Part II, 1967, they have the highest number of visitors during festival times (see Table 6.3).

### Administrative value

Each temple management organises two kinds of events, social and religious. Social events like marriages, engagements and birthdays are frequently organised for the public in the temples. These religious events, organised by each of the temple administrations, may range from everyday worship (*pooja*) to annual festivals. While every temple respects its own deity, the ritual ways of worship are the same and come from specific beliefs and emotions. Two important aspects should be noted: firstly, the number of annual festivals and secondly, the number of visitors during those festivals. In all of the case-study temples, three types festivals were repeatedly observed: a) festivals that celebrate the temple itself, i.e., consecration



(*Bramotsavam*), b) a festival relating to a temple's deities, for example, his birthday, and c) a rope-car procession festival, when the deity 'comes' out of the temples, 'travels' on a temple-car to each of its residents' streets and 'blesses' every resident of the locality (*ther-thiruvizha*).

The common Hindu calendar mostly determines the festivals and people participate in the ritual ceremonies in the belief that by attending the ceremony, they will receive blessings through seeing the god and the redistribution process. During this time, the temple-streets would be decorated with cut-banana trees, mango-leave chains and also temporary thatch structures serving free water or buttermilk.

**Table 6.3 Number of festivals**

	Number of festivals	Number of visitors	Number of temples (for details, see Appendix 2.2)
1	Monthly; mainly 4 annually	More than 100,000	5
2	Monthly; mainly 4 annually	50,000-100,000	2
3	4 Annually	2,000	2
4	2 Annually	50-1000	14

HRCE also conducts social schemes; 8 out of the 36 case-study temples serve noon meals everyday to poor and disabled people and conduct spiritual and moral classes on Sunday afternoons. Sri Kapaleeswarar Temple at Mylapore (Temple 10), Sri Kandaswamy temple at George Town (Temple 20) and Sri Vadapalaniandavar at Vadapalani (Temple 8) all run children's charities (Karunai Illam) to provide food, shelter and education to destitute children.

### **Religious sect value**

The Tamils are mostly *Saivates* or the group worshipping Lord Shiva. This aspect is much reflected in the religious landscape of Chennai city, where most of its temples belong to the *Saivate* sect of Hinduism. The Temple Directory of Madras City, Part II, 1967, notes that only 55 temples out of 288 in the city belong to Lord Vishnu or the *Vaishnavate* sect. Another important point is that most of the historic pilgrimage temples (4/5) belong to the *Saivate* sect. Of the 36 case study temples, 25 belong to the *Saivate* sect, 7 to the *Vaishnavate* sect and 4 belong to both sects.

## Summary

Three Chennai temples are viewed as social systems by the city's residents. The historic, established temples of the *Saiva* sect, have a higher number of annual festivals during which more people visit from all over the city. The temples of Sri Kapaleeswarar Temple (Temple No.10) at Mylapore (Central Chennai), Sri Marundeeswarar Temple (Temple No.1) at Thiruvannamur (Southern Chennai) and Sri Thyagaraswamy Temple (Temple no. 36) at Thiruvettiyur (Northern Chennai) are the temples that continue to be distinctive social attractors and event spaces. One more interesting point is that these temples have their tanks outside them and therefore, much of the urban land relates to the temple, spatially. In other words, they have more temple-related activities outside the temples, i.e., street activities like temple-car processions and tank bathing. These temples are mostly considered for conservation by local architects (very minimally implemented so far - see Chapter 1: 16) and sociologists. These temple locations are commercial nodes of Chennai, therefore, they were used in this research's questionnaire survey (discussed in the next section, 6.2) to discover how users of the space related temple visits to shopping.

## 6.2 Questionnaire analysis

The questionnaire analysis consists of two parts: firstly, a descriptive analysis about all the questions; secondly, an associative analysis of the significance of the various subgroups of the respondents. Finally, the summary combines the findings from these two parts, giving an insight into the social value of the temple, the reasons for the commercialisation of the location and the socio-spatial aspects that have prompted retail activity.

### Descriptive analysis

**Factual data** (see Appendix 3.1, page 260-273, for the tables of numerical values)

#### 6.2.1 Gender and age

Table 6.4 shows that the gender and age distribution of the respondents mostly corresponds to the 2001 Census information, as detailed above.

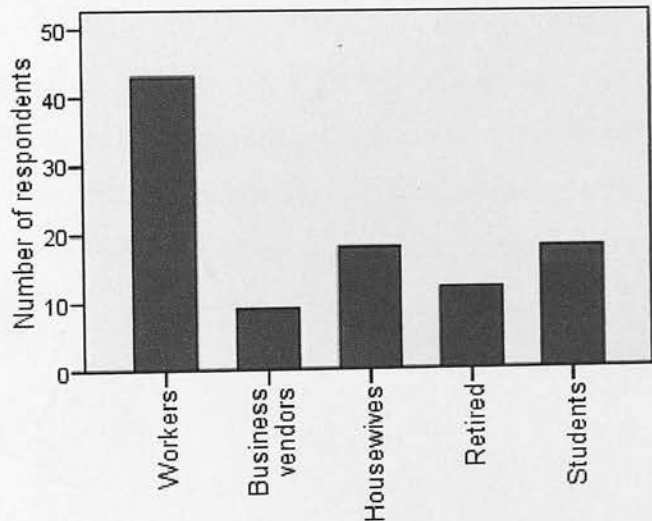
Table 6.4 Age and gender of the respondents			
Age Group	Men	Women	Total
Less than 20	N=10, 20.8%	N=13, 24.1%	N=23, 22.5%
20 - 39	N=16, 33.3%	N=25, 46.3%	N=41, 40.2%
40 - 59	N=16, 33.3%	N=11, 20.4%	N=27, 26.5%
60 and above	N=6, 12.5%	N=5, 9.3%	N=11, 10.8%
Total	N=48, 100.0%	N=54, 100.0%	N=102, 100.0%

### 6.2.3 Religion

The majority of the respondents who stated their religion were Hindus (n=99, 97.1%); there was one Christian and one Muslim. This is a slightly higher proportion of Hindus than the 82% reported in the 2001 Census data, mainly because the author's survey took place near to a Hindu temple.

### 6.2.2 Occupation

The modal occupation of the respondents was the worker-category (see Figure 6.1). The age group, 'less than 20', were mostly students. Most (10/12) respondents in the retired category were men.



### 6.2.4 Locals and non locals

Figure 6.1 Occupation of the respondents

Fifty-five respondents (53.9%) lived in the local area. Most of the respondents were 'housewives' (12/18) and 'retired' (9/12) and were locals; 11 out of 18 respondents who were 'students' were non-locals.



6.2.5 Main purpose of the respondents on the particular day

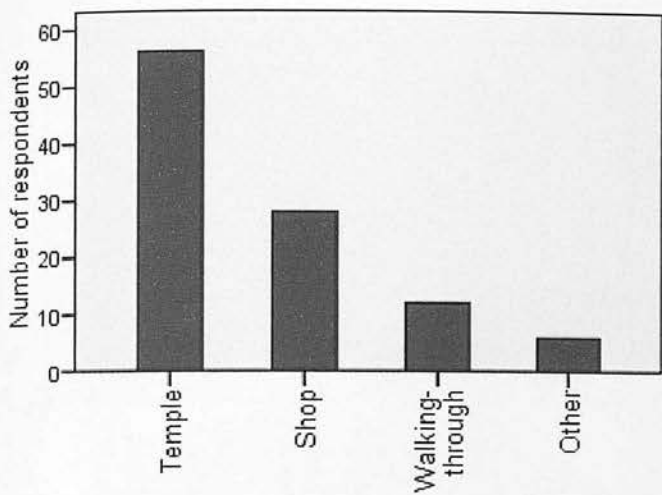


Figure 6.2 Main purpose of the visit

Figure 6.2 shows that more than half of the respondents stated that they had come to the location with the main purpose of visiting the temple (N=56, 54.9%), the next major purpose was shopping (N=28, 27.5%) and the third was walking through for the sake of passing by or socialising.

Whilst there was no significant variance in the spread of the entire range of these activities, as far as the gender distribution was concerned, there was a significant variance in that most of the age group '60 and above' (9/11), gave their main activity as visiting the temple. More than 50% of the temple visitors (27/56) belonged to the worker occupation category.

6.2.6 Travel mode

The total percentage of respondents using public transport was 49%; pedestrians, 31.4%, and private car, 15.7%. There was almost an equal spread of use of the entire range of travel modes as far as the women respondents were concerned; the men mostly used either public transport or walked to

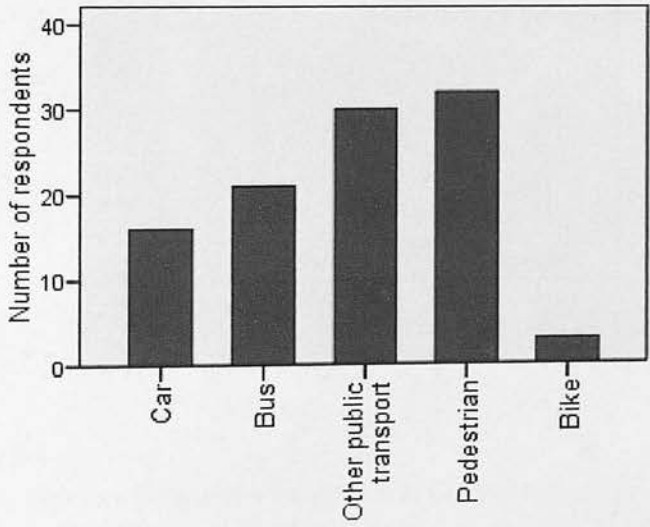


Figure 6.3 Travel mode of the respondents

the location. There was a significant difference in that car users mostly stated that their main purpose was to visit the temple.

6.2.7 Visiting the temple

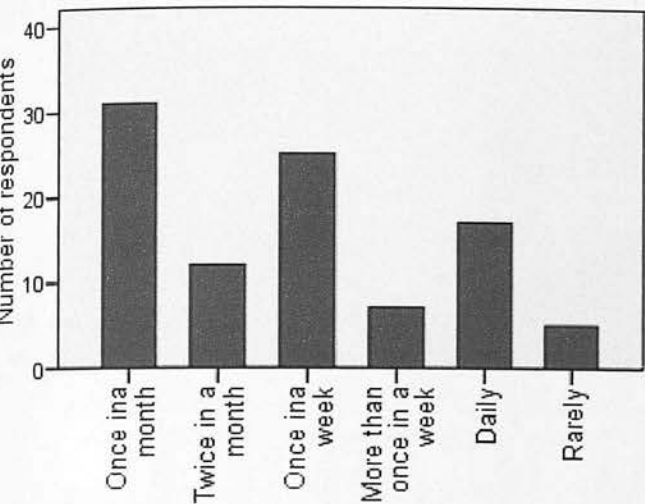


Figure 6.4 Frequency of visiting the temple

96.1% of the respondents mentioned that they visited the temple with the following frequency. The frequencies of visiting once a month, a week and a day descend in statistical value. N=31, 30.4% of the respondents mentioned they visited the temple once a month; most (24/31) were women and more than 50% (19/31) of the monthly visitors

were non-locals. Most of the weekly (18/25) and daily (14/17) visitors were locals.

6.2.8 Reasons for choice of the temple

Figure 6.5 shows that the four major reasons for choosing a temple were a belief in a particular god (N=43, 42.2%), proximity to the house (N=29, 28.4%), community-related reasons (N=11, 10.8%) and traditional aspects (N=10, 9.8%).

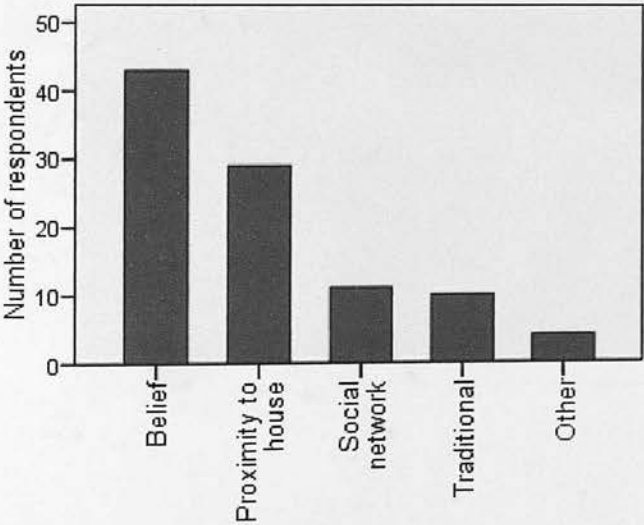


Figure 6.5 Reasons for choice of the temple

Most of the respondents (30/43), who mentioned the belief aspect were women; most of the respondents (25/29), who mentioned the proximity aspect were locals; most of

the respondents (10/11), who mentioned community-related reasons were men who obviously belonged to the ‘retired’ occupation category.

6.2.9 Shopping activity

Of the total respondents N=96, 94.1% said that they used to shop at the case study

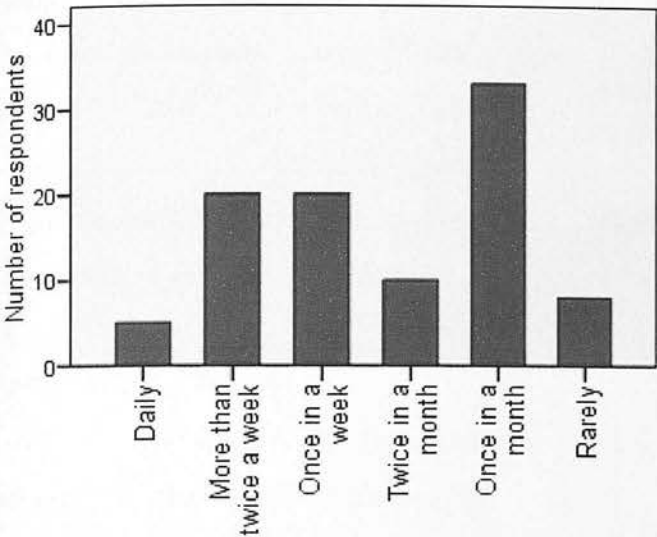


Figure 6.6 Frequency of shopping

that they shop twice a week, were locals.

temple streets. N=33, 32.4% of the respondents shopped once a month; most (20/33) of them were non-locals. Whilst the once- (N=20, 19.6%) and twice- (N=20, 19.6%) weekly frequencies were the average, the daily frequency was relatively, the lowest. Most (18/20) of the respondents who mentioned

6.2.10 Reasons for shopping at the location

In an open-ended question about reasons for shopping at the location, the respondents answers can be categorised into three groups (see Table 3.1.9, Appendix 3.1, page 262) relating to economic (N=40, 39.1%), temple-related (N=38, 37.3%) and locational (N=17, 16.6%) aspects.

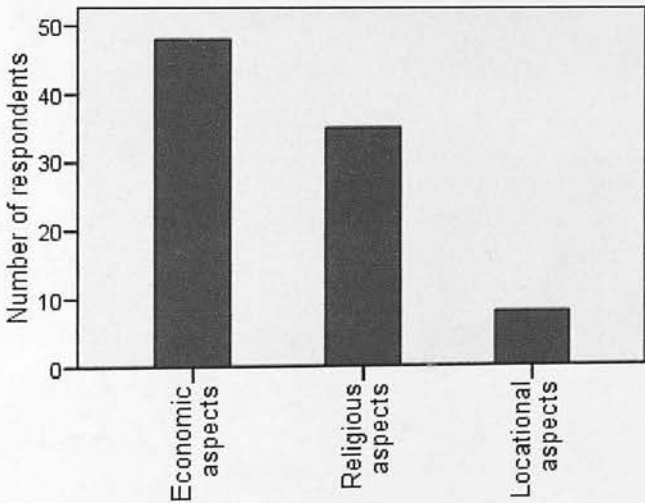
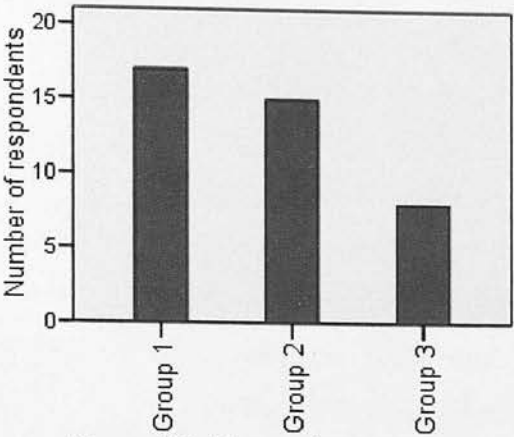


Figure 6.7 Reasons for shopping



**Economic aspects**

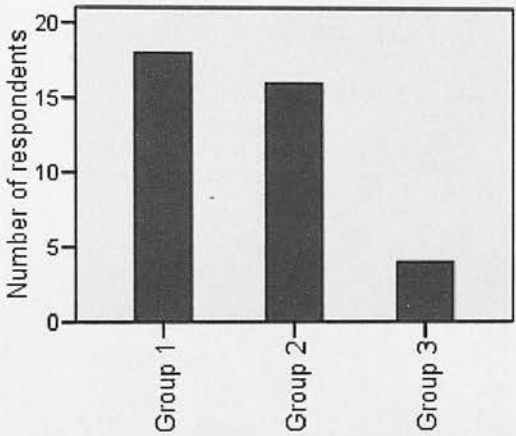
N=40, 39.1% mentioned that they shopped in the given location for economic reasons. These reasons can be sub-categorised as a) “Because of traditional commodities” (group 1), b) ”Because of essential commodities” (group 2) and c) “Choices and bargains” (group 3). The distribution of the number of respondents in these three groups is shown in Figure 6.7a.



**Figure 6.7a Economic aspects**

**Temple-related aspects**

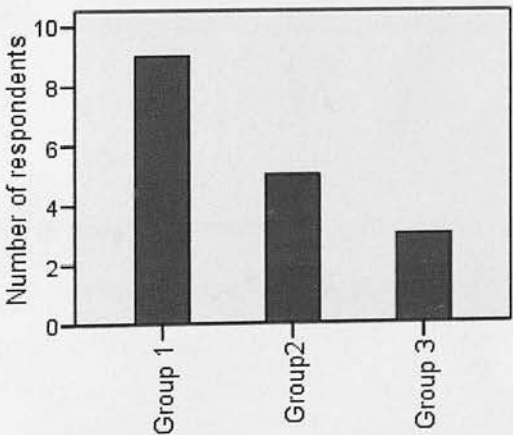
N=38, 37.3% mentioned that they shopped in the given location for temple-related aspects. These aspects can be sub-categorised as a) “To buy the temple offerings” (group 1), b) “To combine with visiting the temple” (group 2) and c) “Religious beliefs” (group 3). The distribution of the number of respondents in these three sub-categories is shown in Figure 6.7b.



**Figure 6.7b Religious aspects**

**Locational aspects**

N=17, 16.6% mentioned that they shopped in the given location because of the location. These aspects can be sub-categorised as a) “Accessibility” (group 1), b) “Because of the location” (group 2) and c) “Availability” (group 3). The distribution of the number of respondents in these three sub-categories is shown in Figure 6.7c.



**Figure 6.7c Locational aspects**

6.2.11 Activity inside the temple

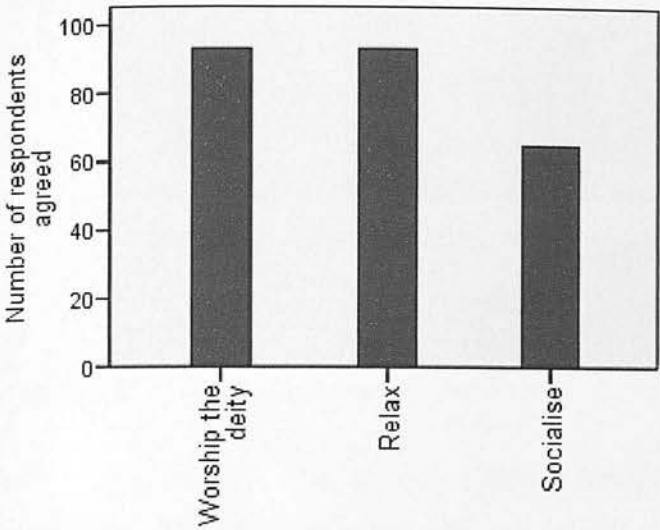


Figure 6.8 Activities inside the temple

Figure 6.8 shows that most respondents agreed that they visited the temple to worship the deity, to relax and to socialise. ‘To relax’ refers to the context of acquiring ‘peace of mind’ by seeking advice, either from the divinity or the elders in the temple premises.

The respondents mentioned that the other activities they take part in inside the temple include spending quality time with the family, sitting alone, walking around and seeing the idols, observing performances and children playing (see Figure 6.9).

Women respondents mostly (10/15) mentioned ‘walking

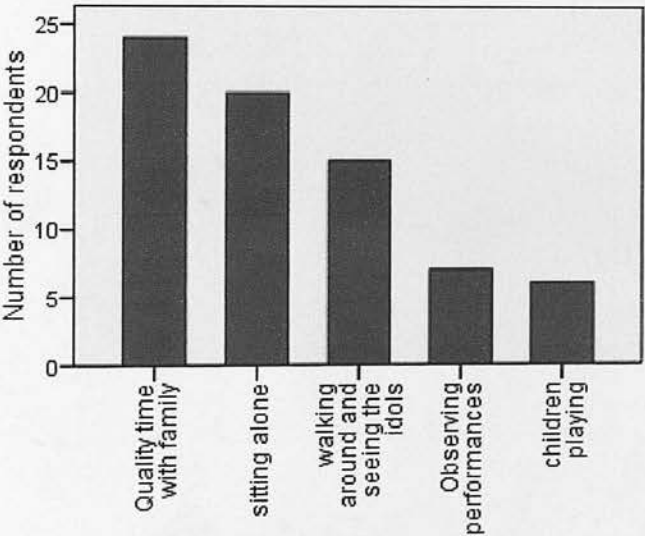


Figure 6.9 Other activities mentioned by the respondents

around and seeing the idols’ as one of their activities inside the temple. Interestingly, all the other activities do not have significance for user-groups.

6.2.12 The location of the “most visited temple”

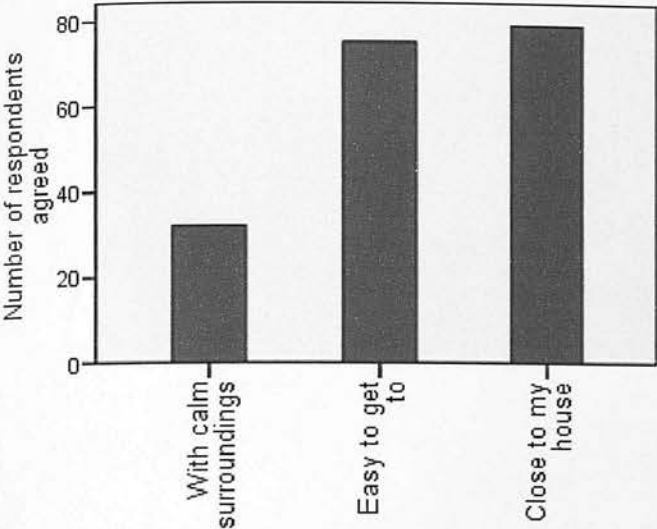


Figure 6.10 "I mostly visit the temples which are..."

Figure 6.10 shows that the most frequently visited temple is the one that is next to respondents' houses. Whilst there was a considerable number of respondents (N=32, 31.4%) who agreed that they mostly visited the temples which have 'calm and peaceful surroundings', frequently temples were visited that

were usually located next to respondents' houses and to which they had easy accessibility. The range of agreement seemed to be spread almost equally among all the sub-groups.

6.2.13 Visiting the temples

Figure 6.11 shows that most of the respondents visit the temple in groups, usually family and/or friends. A reasonable number of people visit the temple alone and along with offerings to the temple. The range of agreement seemed to be spread almost equally among all of the user-groups.

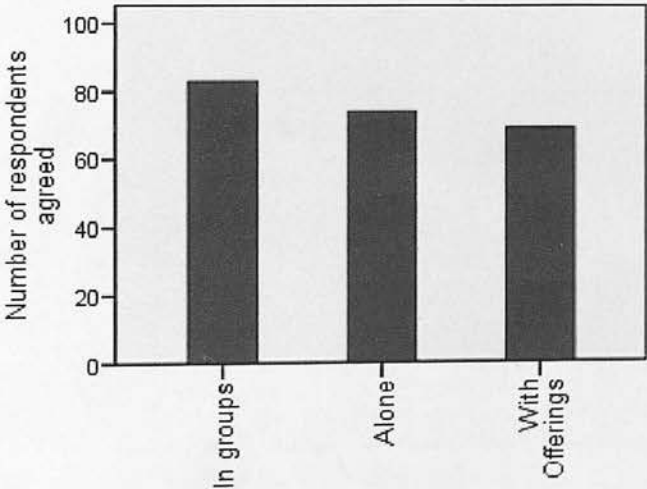


Figure 6.11 "I visit the temples..."



6.2.14 Reasons for shopping

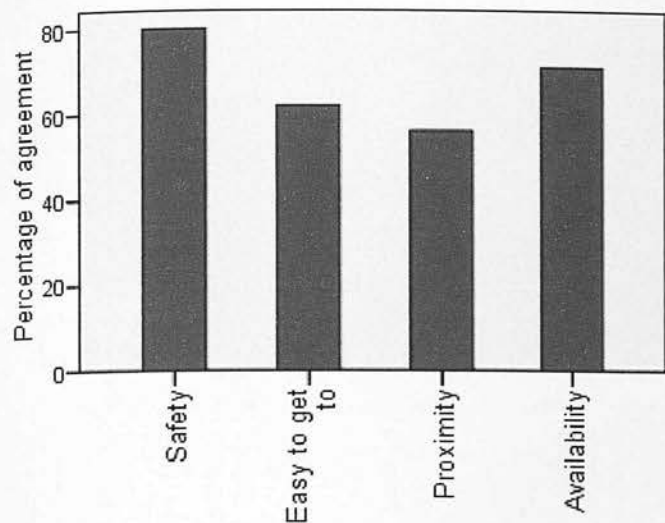


Figure 6.12 Reasons for shopping

Figure 6.12 shows that aspects of safety, accessibility, proximity to the temple and availability of home constitute the reasons for shopping activity in the location. Whilst N=98, 97.1% mentioned they usually visit the temple, N=96, 94.1% mentioned they usually shop at the location. Whilst N=68,

66.7% mentioned that they would combine both activities - of which, N=50, 49% had their main purpose as visiting the temple, N=8, 7.8% had shopping and N=10, 9.8% had other activities as the main purpose of their visit. Most (23/30) of the respondents who disagreed with the locational significance of 'easy to get to' were non-locals who had mainly visited the temple; they rather implied that the 'proximity' to the temple had been a reason for shopping.

6.2.15 Commodities bought

The most important insight is that the three types of commodities, namely, religious (mostly temple offerings), convenience and durables, were frequently bought at the temple sites. Figure 6.13 shows the distribution of the number of respondents who bought these commodities. Appendix 3.1,

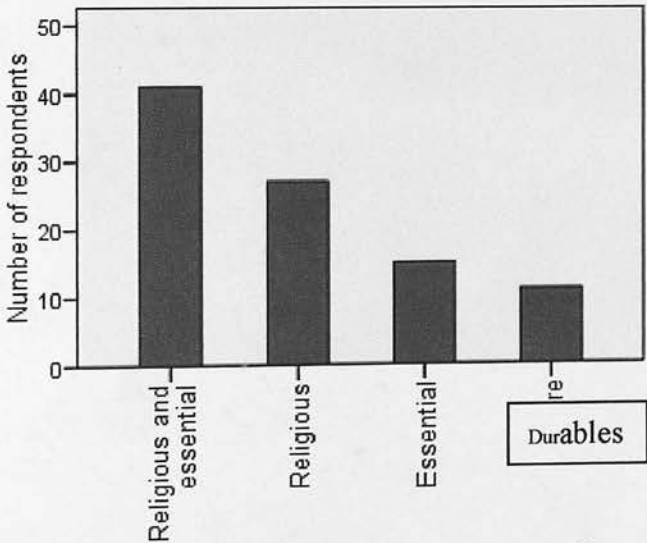
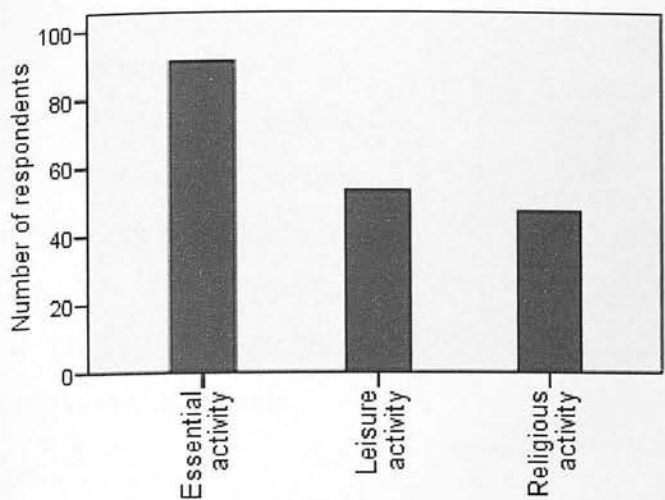


Figure 6.13 Commodities bought by the respondents

Table 3.1.32, page 268, shows that durables commodities were bought less frequently than essential commodities; whilst the frequency was greatest for religious commodities.

6.2.16 Perception of shopping activity



**Figure 6.14 Perceptions about shopping activity**

activity of everyday life. There is a significant agreement for shopping as a leisure activity by the student subgroup (10/18), who mainly visited the shops and socialised on-streets. There is a significant (35/56) level of agreement among non-locals about shopping as being part of a religious activity by the subgroup who gave their main purpose as visiting the temple.

Figure 6.14 shows that shopping at the location is perceived of as an ‘essential activity of day to day life’ by most people, whilst they disagree mainly with the perception of it as being ‘part of religious activity’.

Most of the respondents (N=91, 90%) agreed that shopping was an essential

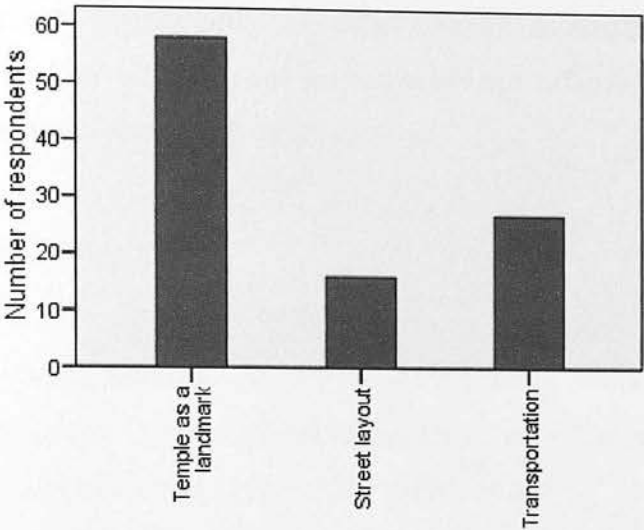
**The location**

**6.2.17 Way-finding reasons**

Figure 6.15 shows that N=58, 56.9% of the respondents mentioned that the temple was useful as a landmark in the process of way-finding; most (36/58) of them had mainly visited the temple.

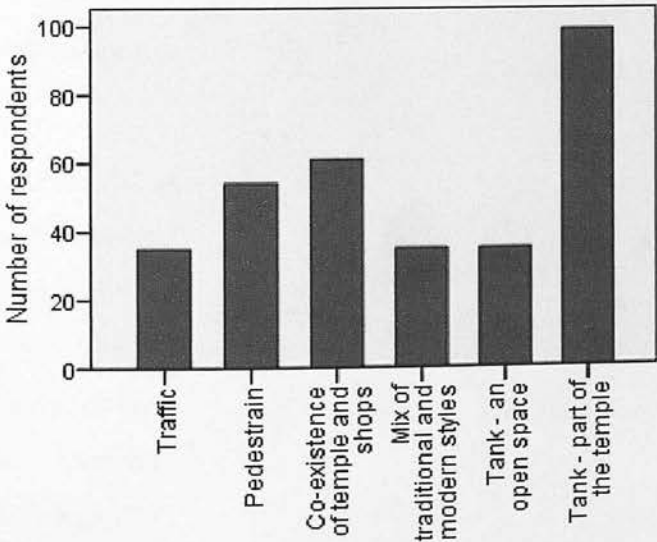
Whilst transportation and street layout are also mentioned as reasons, it was mostly the locals who

mentioned that the street layout was useful in reaching the location. It is important to note that the respondents who mentioned that the temple was useful in the way-finding process, used all modes of travel equally, i.e., car, bus, other-public transport, walking and bicycles.



**Figure 6.15 Wayfinding reasons**

**6.2.18 Perceptions about the location**



**Figure 6.16 Perceptions about the location**



Respondents in all three locations, namely, Thiruvannamur, Mylapore and Thiruvetriyur, mostly disagreed with the statement ‘traffic is just right’. A considerable number of respondents supported the co-existence of shops and temple, but seemingly disagreed with the mix of traditional and modern buildings. More than 50% of the respondents mostly enjoyed using the pedestrian shops. Another inference is that the locals mostly buy essentials and offerings; and the non-locals buy offerings and durables commodities; this can be observed in all three locations.

The three locations differed in the following aspects:

- Thiruvannamur temple streets had a greater (20/20) number of locals, whilst Thiruvetriyur had a slightly greater (19/34) number of non-locals who mostly travelled by car. Mylapore had both local and non-locals almost equally.
- Thiruvannamur respondents significantly (25/30) agreed with combining shopping with their temple visit.
- Thiruvetriyur respondents significantly (22/33) disagreed with the statement ‘I perceive the tank as an open space’; whilst in Thiruvannamur and Mylapore, there was not significant disagreement but a slightly greater number of respondents disagreed with this.
- It was mostly the locals of Mylapore who mentioned that the street layout was useful in reaching the location and that they associate the tank with an open space.

### 6.2.19 Spatial preference

The temple was mentioned as ‘the most preferable spatial element’ by most of the respondents (N=60, 58.8%). When giving reasons for their preferences (see Appendix 3.1, Table 3.1.50, page 273), the respondents who preferred

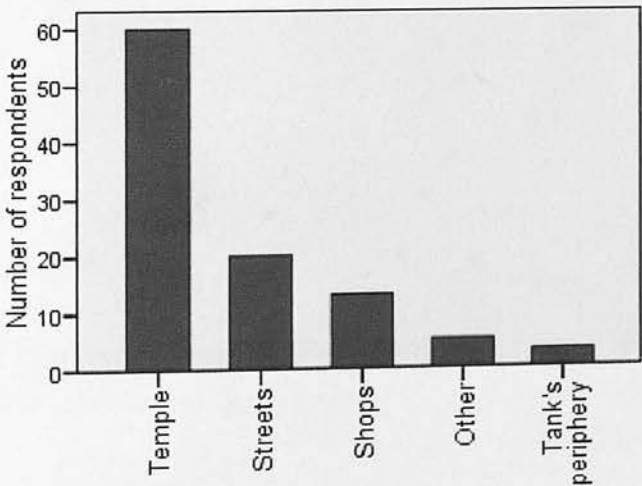


Figure 6.17 Spatial preference

the temple mostly mentioned aspects of ‘timelessness’: realm (N=38, 37.25%), the traditional style of architecture (N=12, 11.8%), unspoilt (N=5, 4.9%). Whilst the respondents who preferred the elements other than the temple mentioned the temporal aspects: liveliness (N=17, 16.7%), commodities (N=10, 9.8%) and spatial layouts/openness (N=6, 5.9%).

#### **6.2.20 The open box at the end of the questionnaire**

A handful (3/102) of the respondents recommended that commercialisation should not occur there, other than for selling the *pooja* things. Women respondents (3/102) stated the ‘convenience’ of shopping next to a temple. One working woman mentioned that the preferred location for a shop is next to a temple. Most (7/12) of the ‘retired’ people and a few others (6/102) mentioned that work is valid and useful in terms of the temple-related aspects.

### **6.3 Associative analysis**

(See Appendices 3.2 and 3.3, pages 274-287, for the tables of numerical values)

The associative analysis provided insight into which group of respondents ‘answers’ differed significantly from the other groups. Four sub-groups were significant in providing useful patterns about the temple, shops and the location\*. The sub-groups are: age, occupation, locals/non-locals and the correlated frequencies.

\* It should be noted that all through this discussion (6.3), capital ‘N’ indicates the total number of respondents; small ‘n’ indicates the number of respondents of the sub group.

6.3.1 Age subgroup

Figure 6.18 shows the distribution amongst the four age groups of the respondents which are, “below 20”, “20-39”, “40-59” and “60 and above”. The associative analysis of the age subgroup provided insight into the perceptions and preference patterns of the respondents, which vary, according to age.

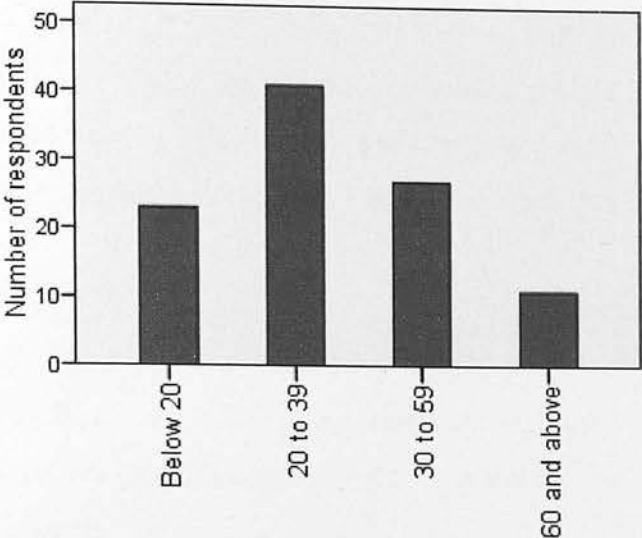


Figure 6.18 Age group of the respondents

The age group, “less than 20”, mostly visited the temple close to their house: they mostly disagreed that the temple is a place for everyday worship: they mostly agreed that they “enjoy the lively atmosphere” and that “shopping is a leisure activity” and preferred all the spatial elements (shops, streets, tank and residences) at the location.

The age group, “60 and above”, mostly visited the temple close to their house and mostly on their own: they almost all agreed that the temple is their place of everyday worship: they disagreed with the statement that “I associate shopping here as a leisure activity” and n=10, 90.9% <sup>2</sup> distinctly preferred the temple as the most liked spatial element.

The age groups “20 to 39” and “40 to 59” have mostly similar preferences. They visited any temple which was accessible and they mostly visited along with their family. n=48, 71.6% <sup>2</sup> preferred the temple.

To summarise, the younger the respondent, the more she/he has an affiliation with using the shops: the older the respondent is, the more affiliation she/he has with the temples: while the middle aged feel that both were essential aspects of everyday life.



### 6.3.2 Occupation

The worker and vendor groups (N=52, 51 %<sup>1</sup>). Of these, n= 43, 83% <sup>2</sup> agreed that the temple is more relevant to their lifestyle; n=42, 82% <sup>2</sup> agreed that commercial activity is an essential activity of everyday life; n=37, 71% <sup>2</sup> mentioned that they would combine visiting the temple with shopping; and n=23, 62.2% <sup>2</sup> combined these two activities at the same frequency.

The housewives' group (N=18, 17.6% <sup>1</sup>). Of these, n=18, 100% <sup>2</sup> agreed that they visited the temples along with their family; n=12, 66.7% <sup>2</sup> agreed that they visited the temples that are close to their house; and n=12, 66.7% <sup>2</sup> agreed that they combined the activities of visiting the temple and shopping.

The retired group (N=12, 11.8% <sup>1</sup>). Of these, n=12, 100% <sup>2</sup> agreed that they come to the temple to relax; n=10, 83.3% <sup>2</sup> agreed that they like the mix of shops and temple uses; and n=8, 66.7% <sup>2</sup> agreed that the temple is the place of their everyday worship (which most in the other socio-economic groups disagreed with).

The students' group (N=18, 17.6% <sup>1</sup>). Of these: n=18, 100% <sup>2</sup> disagreed that the temple is their place of everyday worship; n=16, 88.9% <sup>2</sup> associated shopping with leisure activity; n=16, 88.9% <sup>2</sup> agreed that they enjoy the lively atmosphere; n=10, 56% said the main purpose of a visit was to shop or socialise; and n=8, 44% the main purpose of their visit was to visit the temple. They had a wide distribution of preferences of the spatial elements – temple, tank, streets, shops and residences.

To summarise, the workers and vendors included shops as part of their lifestyle and everyday life: the housewives tended to combine temple visits and shopping for the sake of convenience: the retired group tended to use the shops because of their habitual association and the student sub-group, for its on-street liveliness.

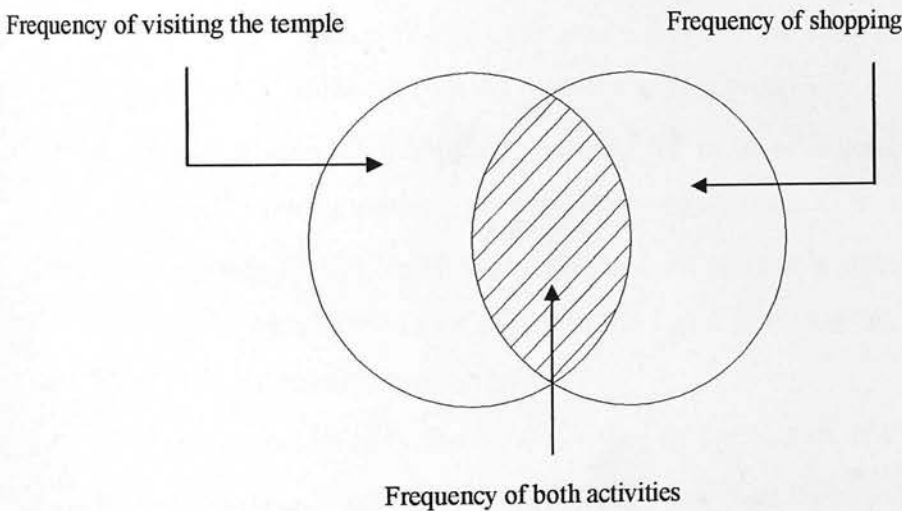
<sup>1</sup> Percentage of the total respondents

<sup>2</sup> Percentage of the respondents of the sub group.

### 6.3.4 Locals and non locals

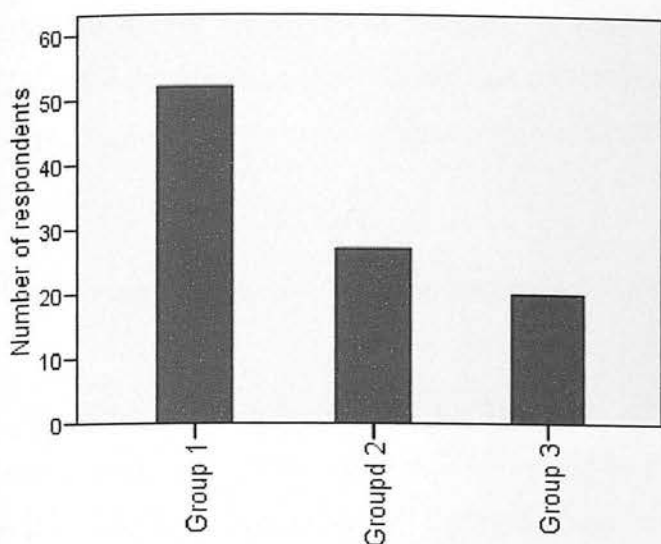
There were slightly more local people (N=55, 53.9%) than non-locals (N=47, 46.1%). The locals mostly walked or cycled to the temple streets; and more frequently used the temples and the shops than non-locals. Three points are useful to note here (see Appendix 3.3.6, pages 284-286). Firstly, it was the locals who mostly bought convenience commodities like groceries, vegetables, stationery and house-wares; whilst, the non-locals mostly bought traditional commodities like temple-offerings, traditional medicines and books and used the restaurants. Secondly, the locals had varied visit purposes, whilst, the non-locals mostly had the same purpose, to visit the temple. Thirdly, the locals had an affiliation to the spatial elements of the temples like the tank and streets, whilst the non-locals felt an affiliation to the temple, which often was their destination point. To summarise, the non-locals who go to the temple do their shopping as part of their temple-related activity: the locals use the temple as part of their everyday activity and therefore, do their shopping as an essential activity relating to the temple and their home needs.

### 6.3.5 Frequencies' correlation



**Figure 6.19 Frequencies' correlation**

Surprisingly, N=52, 51% of the respondents had the same frequencies for visiting the temple and shopping (see Appendix 3.3.7, pages 286 and 287), whilst some of them had one lower or higher than the other. According to this comparison, the respondents were divided into three groups (see also Figure 6.20) as follows:



**Figure 6.20 Groups of frequency correlations**

- Group 1: (N= 52, 51%<sup>1</sup>) had the same frequency for both activities, i.e., visiting the temple and shopping.
- Group 2: (N=27, 26.5%<sup>1</sup>) had a greater temple visiting frequency than a shopping one.
- Group 3: (N=20, 19.6%<sup>1</sup>) had a greater shopping frequency than a temple visiting one.

Of these three groups, the following patterns were found to be significant:

- Most of the non-locals (29/44, 66%), were from group 1, i.e., they had the same frequency of visiting the temple and shopping; whilst the locals were in all three groups, i.e., they go to the temple or shop or combine both.
- Commodities type. For group 1, they were either purely religious (20/52) or religious and essential (24/52); for groups 2 and 3, the commodities vary; and most of the durables commodity buyers are from group 3.
- Shopping is part of a religious activity for most of group 1: they mostly combine the two activities - they mostly bring offerings to the temple.
- The respondents (n=79, 77.5%<sup>1</sup>) who had the same or a greater frequency of visiting the temple than shopping (groups 1 and 2), perceived the temple as a landmark that made it easy to get to.
- There were considerably fewer people who do not visit either the temple or the shops: in group 3, n=2, 10%<sup>2</sup> respondents said they never used the temple – mostly the non-Hindus: and in group 2, n=3, 11.1%<sup>2</sup> said they never used the shops – mostly the non-locals.

<sup>1</sup> Percentage of the total respondents

<sup>2</sup> Percentage of the respondents of the sub-group.



The respondents, who combined visiting the temple with shopping, significantly mentioned that they typically buy religious and essential commodities. There were some non-locals who also bought durables commodities on the day of their temple visit. This implies that the respondents combined all three types of shopping with their temple visit.

### 6.3.7 Generally agreement/disagreement with statements

No particular user-group seemed to agree or disagree significantly, with the statements mentioned in the Table 6.5. This suggests that the level of agreement with these statements is ‘relatively equal’ amongst all the sub-groups.

Table 6.5 Generally agreed statements	
Statements	Number
I visit the temple to be spiritual	93/102
Temples have the potential to attract several activities around them	89/97
I visit the temples along with family	83/95
The temple is more relevant to my lifestyle	81/99
I usually visit the temples that are easy to get to	75/97
I visit the temples alone	74/91
I do shopping here because I get most of the food and household goods I need	71/95
I visit the temple to socialise	65/102

The respondents had various attitudes to and usages of their shopping activity, as opposed to the unanimous agreement for some statements about visiting the temple. There was only one statement about shopping activity that had a general level of agreement. Two points worth noticing here are 1) the relative location of the temple near to the respondents’ houses is one of the important and practical aspects for respondents to most frequently visit the temple. 2) The commodities sold were important aspects for the shoppers, and the locals mostly mentioned that they buy their food and their everyday needs.

<sup>1</sup> Percentage of the total respondents  
<sup>2</sup> Percentage of the respondents of the sub-group.

6.4 Summary of the findings

6.4.1 Socio-cultural aspects

A. Lifestyles

It is surprising to note the similarities of the aspects, regarding both activities, namely a) temporal aspect: there was a significant similarity in the frequency of visiting a temple and shopping; it is important to realise that the habit of combining visiting a temple and shopping is a valid social event in contemporary urban Chennai b) practical aspect; the religious nexus to serve the process of worship inside the temple respondents bought commodities outside the temple and c) perceptual aspect; the degrees of agreement for the aspects of ‘relaxing’ and ‘socialising’ regarding the activities inside the temple, and that of ‘leisure’ or ‘religious’ regarding shopping activities. These similarities suggest that these two activities work together at the same location and therefore that the value of the phenomenon is found.

B. Shopping impulses

Table 6.6 Social patterns		
Shopping impulses	% of respondents	Socially relating to the
Religious shopping	28.7	Temple visitors Mostly non-locals
Religious and convenience shopping	43.6	Temple visitors Mostly local residents
Convenience shopping	16	Mostly local residents
Durables shopping	11.7	Varied Non-locals, locals and temple visitors

Amongst the respondents, three shopping impulses were predominant, based on the commodities bought, namely, religious, convenience and durables (see Table 6.6). It is important to realise that the temple relates to the shopping activity around it to various degrees. Religious shopping related to the respondents who mostly visited the temple and it served as a means of buying the ritual offerings for the temple. The aspect of ‘belief’, mentioned mainly by women respondents, in buying religious costumes next to a temple further validates this. Convenience shopping was mentioned by temple-visitors and others: for the temple-visitors, it served their needs in the form of restaurants (mostly by non-locals) and grocery (mostly by locals); for

others, it served the 'essential' everyday needs (mostly locals). The durables shopping impulse related to both the temple-visitors and others. This impulse with regard to the purchase of traditional/local (silk, gold, glass etc.) and modern/westernised (ready-made clothing, beauty shops, etc.) commodities, applied to the temple-visitors and others. Another important set of patterns is that of the perception about the shopping activity: a) respondents who mentioned their perception of shopping activity as 'everyday activity' bought religious and convenience commodities b) those who mentioned the same as 'leisure' bought the durable commodities and c) those who mentioned the same as 'religious' bought religious commodities.

#### **6.4.2 Socio-economic aspects**

##### **A. An holistic perspective**

The occupation sub-group had the most holistic perspective about the ways that the urban public uses the temple and the shops. It was a habit for the elderly group, an aspect of convenience for the housewives' group, an essential activity of everyday life for the middle-aged group, and a lively on-street activity for the young adult group. It is imperative to understand that people's occupation significantly influences their lifestyles and therefore, reflects in the religious part of their life.

##### **B. The temple as a consumer**

The economic activity inside the temple is part of the process of worship (see. Chapter 1: 11) and operates at various levels, from simply buying camphor to taking-over the responsibilities of sponsoring events (*poojas*) for the whole day. Retail activity involving the buying of commodities that serve these religious events is directly relevant to the function of the temple.

##### **C. Commodities and affordable prices**

The availability of traditional (local medicines) and essential commodities and their choice and affordability were found to be socially valid reasons for shopping at the location.



### 6.4.3 Socio-spatial aspects

#### A. Temple and the urban space

The temple gives a particular meaning to urban space. The temple offers a place with which people associate the divinity, and that attracts people to this space. The temple attracts a wide range of people locally and from the other parts of the city. The temple acts as a landmark in these urban spaces. The temple, which is traditional in its architectural style and magnificent in its scale, was a preferred spatial element in the given environment.

#### B. Shops and the space

Shopping impulses generally varied according to the needs of the visitors, namely, locals and non-locals as mentioned above. Whilst the locals bought essential commodities mostly, non-locals bought mostly religious and durables commodities. Spatial reasons like accessibility, safety, transport and the street layout of the temples and shops were mentioned as reasons for shopping. Usage of the shops, independent of the activity of visiting the temple, was primarily related to the location of the temple.

### Conclusion

Historically, the role of a temple was a place of worship, a consumer and a place of sociability. The contemporary society has proven that the temple is a valid cultural space through their lifestyles and perceptions. An important function of the Chennai temple today is as an attractive public event place. These functions of the temples: to organise events, offer accessibility, etc., resulted in a wide range of activities being offered, with opportunity and choice in and around them at various times of the day and days of the year. The temples offer a) place attachment through the historic context and belief on the deity, b) extended various habitual aspects to all socio-economic groups; c) imposed liveliness in the space for all ages and gender groups; and d) encouraged cultural exchanges and social integration for everyone. Therefore, all the temples are places for quality time for Chennai citizens, historically and contemporaneously.

A temple-retail paradigm is suggestive of a complex and ongoing mechanism. The questionnaire survey findings note the social processes that shape this urban phenomenon. Socio-cultural aspects of religious nexus and lifestyle patterns directly relate the temple to retail activity; in the urban context, these two aspects make the temple-locations centres that continuously update traditions to suit contemporary lifestyle. The socio-economic aspects of working lifestyles, the value and cost of the speciality commodities and the continuous and demanding role of the temple as a consumer, all specifically and significantly relate the temple to retail activity. The socio-spatial aspect of the temples' location is related to retail activity in two ways: the patterns of local and non-local users of the space and the economic potential of the urban space itself, i.e., its facilities and amenities.

Consistently, three shopping impulses result from the significance of these socio-cultural, socio-economic and socio-spatial aspects. These three impulses are distinct. The religious and traditional shopping impulses mostly gain their significance from the socio-cultural and socio-economic aspects of the temple, i.e., the temple and the retail activity run in parallel; they benefit from and directly relate to each other. The convenience and modern shopping impulses are relevant mostly to the socio-spatial aspects of the temple-users and temple-locations, respectively.

## Chapter 7

### Research conclusion

#### 7.1 Findings so far

The research investigation looked at the range and types of relationship between temples and retail activity in the city of Chennai. The study had the following objectives: a) to investigate international religious public places; b) to gain insights into the local historical perspective; c) to examine the spatial aspects that related the temples to the adjoining retail activity in the city of Chennai; and d) to explore the social aspects that related the temple to its adjoining retail activity in the city. Whilst the literature reviews in Chapters 3 and 4 offered, respectively, valuable insights into the first two objectives (a and b), the empirical investigations in Chapters 5 and 6 established, respectively, the patterns regarding the third and fourth objectives (c and d).

The literature review comprised two parts, namely, the international and the local historical. The review of international religious public places (Chapter 3, page 66) suggested that religious public places were centres for retail activity during the medieval period. In the West, today, the tension between consumer-oriented societies and conservation-oriented planning authorities has reconfigured the locations of historical public places, namely, city centres, into commercial zones rather than their having any predominant socio-religious connection, as was the case in medieval times. In the Middle-Eastern context today, the conservation of historic old city centres is paramount and there is an appreciation that the traditional layouts work well socially, even in contemporary land use contexts.

The local-historical review (Chapter 4, page 102) showed that the Hindu temple in Chennai, and its adjoining landscape had a continuous association with socio-political and socio-economic networks during the medieval period, and the socio-economic association continued even in the British period. It also showed the changes in the land use pattern at, and the continuous importance of, the temple location throughout history. The local-historical review also summarised the social role of the temple throughout history. From the review it can be seen that although there is an extensive literature available, in terms of its coverage of local sociological perspectives like the caste system and political



ideologies, a Western way of understanding Indian city's urban spatial structure is still lacking. The empirical study (Chapters 5 and 6) used the techniques which were found in the international literature review. This made it possible to compare Chennai city's urban spatial structure with international contexts and this aspect is discussed further in this chapter.

The author investigated the spatial and social processes of the temples in Chennai, the capital of the Indian state of Tamil Nadu, and the author's home city, to gain knowledge and an understanding of the relationship between a religious place of worship, the Hindu temple, and its adjoining retail activity. The empirical data collected presented documentation about the temple landscapes in Chennai (Appendices 2-1 to 3-3, pages 202 to 287). Given that Chennai city covers 172 sq.km., the author chose to study 36 temples, or all the temples that had a temple-tank, in a variety of Chennai locations, each with different spatial qualities and scales of retail activity. The Space Syntax analysis of Chennai's temples is the first time, in relation to Chennai city, that such an analysis has been undertaken. The author used the empirical and evidence-based resources of the case studies to understand the complexity of this urban phenomenon and also established the objective, measurable spatial and social attributes of the temple-locations. The multiple case studies revealed the intrinsic qualities of the temple locations.

The spatial study (Chapter 5, page 143) found that the spatial characteristics, such as the location of the temple and tank on the street, the space syntactic values, local land uses, the function of the temple street and local landmarks together, in that order, determined the five spatial typologies of the Chennai temple-retail relationship. In addition, the spatial analysis (Chapter 5: Figures 5.2 & 5.3, pages 111 & 115, respectively) provided an understanding of the city's context that helped the author to understand the retail background of the 36 case-study temple locations.

The social study (Chapter 6, page 168) suggested that the developmental process and the inclusion of the temple in the everyday life of the people are two important social aspects necessary for a temple to attract larger numbers and thereby, to become associated with the adjoining retail activity. Chapter 6 also established that the social patterns of religious, convenience and durable shopping impulses were associated with temple visits through various social patterns. The patterns relating to religious shopping were primary shopping

activities for temple-visitors and corresponded to the religious nexus, and those relating to convenience and durable shopping were secondary shopping activities for the temple visitors and were related to users' lifestyles. In addition, the social study (Chapter 6: 168) determined the function or the social role of the temples in the urban context as an attractive public event space.

This concluding chapter will propose an answer to the research question and the investigation's objectives, by examining the findings from the empirical studies and the literature reviews. This chapter will:

- Examine the contemporary and historical contexts to establish the development of the relationship between the temple location and retail activity (section 7.2 of this chapter).
- Draw comparisons with international contexts in order to gain a wider perspective of the religious/commercial relationships that have existed or currently exist in other places and to establish any associated retail activity patterns that have existed or exist at these sites, and the significance of these findings in relation to the Chennai case studies (section 7.3 of this chapter).
- Correlate the findings from the empirical, namely, the social and spatial studies in order to establish the social meanings behind the spatial landscape (section 7.4 of this chapter).
- Present recommendations that would help the future of Chennai city.

## **7.2 Developmental process through the history of the temple-retail paradigm**

### **7.2.1 Fundamental changes**

The urban temple-locations show two fundamental changes in their social characteristics, firstly, in terms of their economic activity and secondly, their planning aspects. Chapter 4 found that the medieval temples were the urban centres and the predominant land use around the temple-locations was agricultural, which was owned and controlled by the temple management and therefore, the temple location supported a rural economy.

Today, the predominant economic activity around the urban temple is retail. As well as the obvious economic difference, there is a difference in the temples' spatial articulation, from open space to a built environment and thus, a change in its character, from rural to urban. The key point is that the temple location, as in the past, continues to be today the focus for economic activity. Another fundamental social difference is that historically, the spatial planning around the temple was achieved from the outset by socially powerful groups of rulers and priests; whereas today, the spatial articulation is unplanned and has been created in response to the power of a consumerist society.

### **7.2.2 Networks and centres**

The socio-political and socio-religious networks between the rulers and priests that developed urban centres like *brahmadeya* and *nagaram*, ended during the British rule and do not exist today. Conversely, the urban centres have developed spatial networks. The typology 1 temples are the urban centres that have multi-land uses and high population densities, such that they are major districts of the city. The temples have developed networks of spatial relationships on two levels, the city and local. It is of note too, that the routes which connect typology 1 temples to the city centre are the important commercial corridors of the city; and the routes connecting the cluster temples of typology 4, are having a significant effect on the development of the local commercial streets.





**Figure 7.1 Temple streets of Nanganallur**

Such a cluster-effect can also be seen in Nanganallur, a settlement in suburban Chennai. In Nanganallur (see Figure 7.1), the connecting routes to the four temples of the *Vaishnva* sect of Hinduism, are now the commercial streets of the locality.

### **7.2.3 Spatial landscape and the history of the temple locations**

Surprisingly, there are two correlations between the spatial typologies and the historic periods of the temples: a) the temples of the pre-British settlements belong to typology 1; and b) the temples of the British period belong to typology 2. In other words, the pre-British temple was at the core of a settlement (e.g. Mylapore and Thiruvettriur) and the British temple was on a main route of a settlement (e.g. Washermanpet and Chindadripet). These points raise the interesting idea that, probably, a change occurred in the spatial articulation of the location of the temple with respect to the settlement in the British period. In the pre-British phase, a temple was built by a community and was located at the settlement's core; whilst in the British phase, it was built by local merchant-immigrants and was built on the main route of a settlement. The concept of the spatial articulation of the the temple during the pre-British period, which put it at the centre of a settlement, was superseded during the British period by it being an object on a linear street.

## **7.3 International comparison**

### **7.3.1 The medieval period**

The south Indian medieval temples, socially, were analogous to the Middle Eastern mosques and European medieval cathedrals, in terms of their being the legitimate focus of the social, political and religious life of their people, and in that their priests had a continuous association with the state. There were many differences in the spatial articulation of the temples. Public facilities, unlike in the Middle-Eastern and European contexts, were not provided outside the temple. It was inside the temple campus itself that the locus of activity existed; the south Indian temple was a place for business and political meetings, academic schools, courts and economic sanctions. There is a difference also, in the location of the market place, which was not close to the temples in most of the south Indian cases (the only exception was Kaveripoompattinam; see Chapter 4, page 81) but the important routes of the urban area connected the temples' locations to the market places. The temples were rather in the middle of residential settlements, surrounded by agricultural allotments (see Chapter 4: Figure 4.6, page 84).

Place association, in relation to a temple and market place, became evident in the British period (AD 1660-1947). The George Town temple, for example, is the first temple in Chennai's history to be built on the market square itself (see Chapter 4, page 94). This temple was built by the British and is very similar, spatially, to medieval European contexts, in that in those cases, often the church and market shared the same square.

### **7.3.2 Contemporary period**

An interesting finding is that in Middle-Eastern, Islamic and in Chennai's Hindu landscapes, the places of religious worship continue to be socially valid but they are in need of proper attention, in terms of spatial planning. Conversely, in European Christian landscapes, although churches face a change in use from religious to, for example, hubs and libraries, they are given attention by spatial planning policies and applications. In other words, the spatial proximity of European cathedrals to retail is mainly an urban-design feature to meet tourist requirements while in the case of Chennai and the Middle East, it is an everyday activity for the locals. There is a lesson here for Middle-Eastern and Chennai planners to give importance and consideration to these historic and

contemporary religious places in the way they are considered in urban spatial planning.

Another similarity between the Middle East and Chennai is the location of the shops selling durable, convenience and religious commodities. In both cases, pure and sacred commodities are sold close to the places of worship and products such as alcohol, etc., are sold at some distance from the holy places.

### **7.3.2 Chennai today**

Chennai society has been multicultural for at least 400 years. The city accommodates all religions – Christianity for more than 400 years, Islam for more than 1000 years and Hinduism since even before Chennai was established as a city. All these religions are accepted and India has maintained ‘unity in diversity’ throughout its history. The association of a place of worship to retail activity is reflected in the city’s unique landscape, for example, the Mother Velankanni Church has commercial activity on a beautiful beach, and the Mosque of Western Saidapet has its own retail markets, owned and served by the local Islamic community.

As far as the temple-retail paradigm is concerned, it works because Chennai society still accepts Hinduism as the predominant religion of the city. In Chennai, consumerism and western values have not necessarily led to the end of religion. Rather, retail activity is conjoined with religion such that, in many respects, religion still dictates the way of life. The temple holds an important value in the everyday life of the people of Chennai. The 36 case-study temple locations (mostly the typology 1 case-study temples), have a ‘cultural landscape’ (Rapoport, 1977: 150), with temple-related spatial settings and social patterns that distinguish these places from other temple locations and this gives them a particular identity.



## 7.4 Correlation of the spatial and social findings

### 7.4.1 Temple-retail paradigm and the city of Chennai

At first sight, the spatial organisation of the commercial land use of Chennai looks chaotic, however, the spatial and social analysis has added to the knowledge of the city's growth pattern. The land use of the city shows two interesting logics to the organisation of the districts within the city: on the one hand, the city has a central core, which comprises dense commercial land use and includes George Town, Purasiwalkam and the Anna Road areas; on the other, the historical temple zones at the periphery, like Mylapore, Thiruvananthapuram, Saidapet (route further extends to Velacherry), Vadapalani, Nungambakkam, Villivakkam and Thiruvettriur have multi-land uses. While the first set of districts form today's city centre, the latter ones are micro-cities, yet they are part of Chennai and as such, can best be described as 'cities within the city'.



**Figure 7.2 The commercial corridors of the city**

The importance of the historical temple locations, with regard to the all-pervading commercial land use of the city, can best be understood by the Space Syntax illustrations (see Chapter 5: Figures 5.2 & 5.4, pages 111 & 116, respectively) which noted two major

findings: that the best integrated streets of the city centre comprise the major commercial zone of the city, corresponding to their structural complexity measured by the Space Syntactic values; and that when the Syntactic values are low at the periphery as an 'edge-effect' (Hiller, 1999a: 121), the routes connecting the city centre to those fore-mentioned micro-cities are the major commercial corridors of the city (see Figure 7.2).

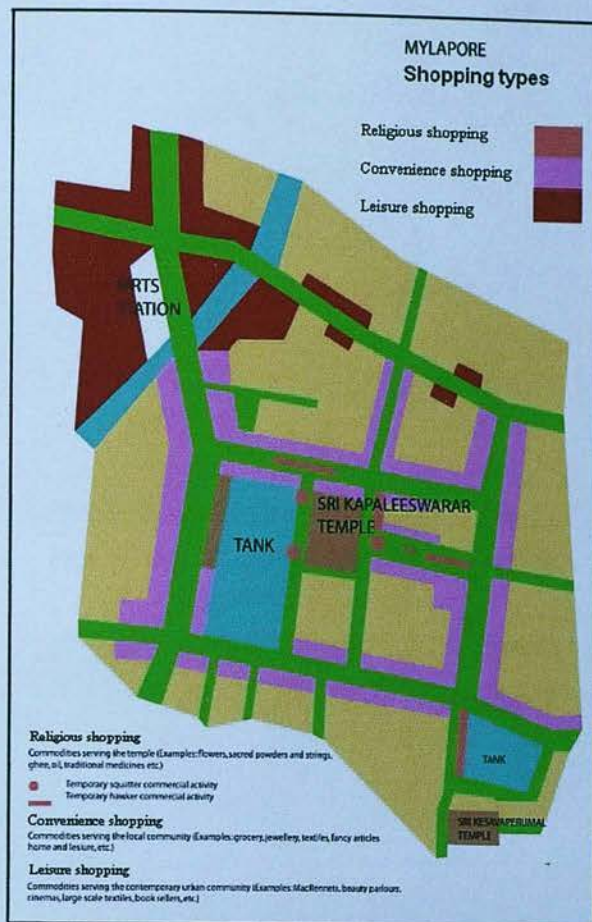
Chennai's development consists of both spatial and social logics. Whilst the land use organisation of the centre goes by urban spatial form, measured by the Space Syntactic values, that of the periphery, mostly shows the urban functions at the temple locations. That is, the centre has predominant commercial land use and the urban space, other than centres with historic temples, has multi land uses, therefore, the Space Syntax and the temple locations provide insight into the functional logics of the city centre and fringes, respectively.

The city is 'organic' and forms a 'whole' (Alexander, 1987: 10). It has grown in a piecemeal way, however, the author's study established that these multi-districts are growing exponentially and are emerging from the peculiar structural nature of the city's past. Chennai is coherent, in that these multi-districts do contribute to the whole. The historic temple settlements induce a multi-centre effect in the city and, therefore, the city's organisation is a combination of pre-British morphological units and the overlaid, street-structural pattern of the British and contemporary phases.

#### **7.4.2. Geographical spread of sacred and secular commodities**

The social study, (Chapter 6: Table: 6.6, page 166) showed that there are three shopping impulses, namely for religious, convenience and durable commodities. The spatial study, (Chapter 5: Table: 5.12, page 137) noted that based on spatial qualities, religious commodities are sold close to the temples, whereas convenience and durable goods are sold at a tangent to the location. The pattern of the spread of these shops, depending on the commodities sold and in terms of their spatial organisation, offers a link between the urban configuration and the temple locations. Figure 7.3 illustrates how the commercial land uses of the temple location merge into that of the city.





**Figure 7.3 Shopping types and land uses – Typology 1**

The religious-associated retail activity exists close to the temples (see Figure 7.4); convenience goods are sold adjacent to the adjoining residential land use (see Figure 7.5) and durable goods are sold mostly on the main traffic/arterial roads of the city, which are mostly the city's commercial corridors (see Figure 7.6). The pitches accommodating the sale of religious goods are the liveliest because hawkers hold the commodities in their hands, calling out to people to buy them. Retail activity associated with religious commodities extends the ritual activity beyond the boundaries of the temple and is a reminder of and brings back the past. The temple and the related retail activity together present each temple location as a cultural enclave in the urban landscape.





**Figure 7.4 Shops selling religious commodities**



**Figure 7.5 Shops selling convenience commodities**




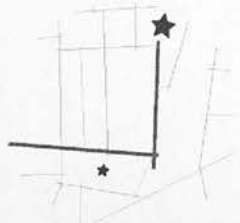

**Figure 7.6 Shops selling durable commodities**

It is also interesting to note that the types of accommodation vary for these three retail types; street sellers tend to occupy temporary stalls and/or they are simply hawkers; convenience goods tend to be sold from the ground floors of buildings; while durable goods' outlets usually require whole buildings, such as department stores. The three retail types, their structures and the geographical spread of shops selling these goods, together, give a particular place identity to the commercial land use at each and every temple location as explained below.

#### **7.4.3 Space Syntax and temple-retail paradigm**

The geographic spread of retail types, when compared with Space Syntax analysis, further clarifies the phenomenon. Table 7.1 illustrates the combination of the Syntactic values, spatial typologies and the geographic spread of retail types that makes up the temple-retail paradigm in Chennai city.

It is interesting to note that the spatial characteristics of the urban locations of the temples and the adjoining land use vary, according to the historic period of the temple. Surprisingly, the historic quality of the temples also corresponds with the syntactic values and therefore, the retail types. The temples of the pre-British period have medium syntactic values and mostly sell all three retail types while the temples of the British period have the highest Syntactic values and mostly sell durable shopping goods and it is important to realise that the historic periods of the temples contribute to the patterns.

Table 7.1 Space Syntax insights - Comparison of the spatial typologies and social shopping types			
Spatial typologies	Type 2	Types 1, 3 and 4	Type 5
Space syntax integration values	Highest syntactic values 	Average syntactic values 	Lowest syntactic values 
Social shopping types	Durable shopping	Convenience shopping	Religious shopping
Land use	Predominant land use Commercial	Predominant land use Residential	Predominant land use Residential with institutional or industrial
Retail activity	The degree of relationship of commodities to temple-related uses: Minimal	The degree of relationship of commodities to temple-related uses: Average	The degree of relationship of commodities to temple-related uses: Maximum
Historic periods	British period	Typology 1: Pre-British, Typologies 3 and 4: British and contemporary	No correlation with historic age



#### 7.4.4 Classification of the temple-retail relationships in the city

In Chapter 5, the author discovered the relationship between 'things and things' (Rappoport, 1990: 11), and she suggested that there were five spatial or physical typologies. The social meanings which her investigation allowed her to attribute to these typologies generated a further understanding of this issue. Chennai inhabitants' lifestyles are a contributory factor in relation to the social meanings which can be ascribed to the temple-retail paradigm. The findings related to these lifestyles (mentioned above, 7.2.1 to 7.2.3) suggest that the temple as a social space has a significant role in changing the land use of the location when the space syntax values are medium, and that the space or the spatial quality influences the land use at the highest and lowest space syntactic values. The relationship between the temple and retail activity, therefore, seems to follow three different patterns with the relationship of the spatial and social aspects in the case-study temple locations. These are: a) when the spatial and social aspects form a complementary relationship, b) when the spatial aspect is overwhelmingly more powerful than the social aspect, and c) when the spatial aspect is non-existent and only the social aspect survives. These findings allowed the author to establish that for all 36 case-study temples, the relationships between the temple and retail activity can be classified as: synergistic, symbiotic and dysergic relationships. All the temples in her study can be grouped under one of these three classifications.

##### A) Synergistic relationship

Synergy is a word from the Greek (meaning 'working together') and refers to a situation wherein the effect of two or more co-operating or combined bodies or functions is larger than the sum of the effects each body or function alone can achieve. Synergy is often popularly formulated as  $1+1>2$ . When the social and spatial aspects work together, there seems to exist a synergistic relationship between the temple and the adjoining retail activity. On the social context side, the temple in this classification attracts the highest number of visitors, with popular annual events; and the temple 'belongs' to the local residents in its development and everyday use. The spatial characteristics complement these social aspects such that a) a temple street has medium syntactic values that allow a spatial location, which is in between highly integrated prime commercial streets and local residential streets, for the temple, b) predominantly mixed residential land use encourages the locals to use the temple; and c) the temple tank outside the temple literally extends the

religious realm into a wider, public domain. The temple-streets, the temple space itself and the space that accommodates related retail activity work together to produce significant commercial activity. These temples are at the core of a settlement or housing quarter and, therefore, are the 'microcosm' of traditional temple urbanism in the contemporary urban landscape. The temples that have a synergistic relationship with the retail activity around them are as follows:

a) Core temples

These are the historic temples and city-wide pilgrimage centres; they are typology 1 temples (see Chapter 5, page 138). These are mostly urban micro-cities or cities within a city or poly centres of a city. These particular temple-streets, surprisingly, sell all three retail types: religious, convenience and durable goods.

b) Single temples

These are the temples within a locality; they are typology 3 temples (see Chapter 5, page 140). The shops sell religious and convenience goods.

c) Cluster temples

These temples exist in pairs or in a group and are connected within one or two adjoining streets; they are typology 4 temples (see Chapter 5, page 141). The shops sell religious and convenience goods.

## **B) Symbiotic relationship**

Symbiosis, again a word from the Greek (meaning 'living together'), refers to living together but not necessarily in a relationship that is beneficial to each other or each component part; it can be formulated as  $1+1 < 2$ . When the spatial aspect is overwhelmingly powerful in the urban configuration, i.e., when the temples are located on a street with the highest syntactic value, then there seems to be a symbiotic relationship between the temple and the adjoining retail activity. The temple-community does not reside next to the temples or it has left the locality; the movement of people on the streets is due to the spatial integrity within the global urban configuration ('global integration value'). The spatial characteristics are: a) the streets with the highest Space Syntactic values, b) the commercial land use impinges predominantly on the location; and c) the temple tanks are inside the temple periphery; and the annual festivals cause on-

street congestion and this means that their streets, during those times, can be used only by pedestrians. These temples are located in close proximity to other buildings such as commercial skyscrapers. Their location in the urban landscape is predominantly within a bustling urban commercial street and, therefore, the phenomenon is linear in pattern, as opposed to the central core pattern of traditional temple urbanism. These are typology 2 temples (see Chapter 5, page 139). The shops mostly serve durable goods.

### **C) Dysergic relationship**

Dysergy is, relatively, a new word (meaning the opposite of synergy, and therefore, it means 'not working together'); the combined parts have properties that are more or less the sum of the parts; they are in a perfect state of equilibrium; and can be formulated as  $1+1=2$ . When the temple is located on the least powerful urban configuration, i.e., the lowest Space Syntactic values, with tanks inside the temple premises, there exists a dysergic relationship between the temple and the adjoining retail activity. It is rather a 'blessed' relationship in the sense that the retail activity purely involves the rituals of worship. These temples attract only the local population; the majority of the local residents may not be the temple's community – for example, the *Vaishnava* sect temple, Sri Kothandararama temple (Temple 8) at W.Mambalam. The spatial qualities exhibited are: a) the streets have the lowest global and local Syntactic values, b) predominant land use could be residential or industrial or institutional and c) the tanks are inside the temples; these are typology 5 temples (see Chapter 5, page 142). It is a 'closed' or one-to-one relationship, selling just religious commodities. These temples are 'hidden' or more tranquil in the urban landscape.



## 7.5 Recommendations

### 7.5.1 Recommendations on the temple-retail paradigm of the city

Temples are icons that deserve special attention in urban design because they offer place identity, a sense of community and significant user-patterns. The temples in various parts of Chennai city need varied urban design strategies as recommended below. The draft Second Master Plan, developed by the Chennai Metropolitan Development Authority (CMDA), is now published and available for comment.. The thesis recommends that the draft Second Master Plan should consider the following:

#### 1) The temple-locations of Classification 1 – Synergistic relationship

##### A. Spatial planning

The CMDA's draft Second Master Plan, in its second objective, stresses the importance of spatial planning 'by recognising the existing growth trends and by suitable allocation of land uses' (page 61). The thesis' recommendations should be taken into account in terms of the following:

- The commodification of land must suit existing patterns of development at the historic temple locations. This means that commodities'-based retail development need not be changed, that is, religious commodities should sit next to the temple, convenience commodities should be on people's way to the temple from their homes or near to transit stations, and durable goods' sites should be a few streets away from the temple locations.
- The new temples should be located two or three streets away from the main arterial roads in order to allow the existing pattern mentioned above to be repeated.
- This means that any shopping malls selling western commodities should be located a few streets away from the historic and new temples.

##### B. Social sustainability

In order to achieve the sixth objective of socially sustainable urban spatial planning of the CMDA's draft Second Master Plan, the above spatial use is recommended.

In order to obtain community participation in the planning process, it may be beneficial for the authorities to realise that a) the temple communities' opinion in determining the spatial use at the temple locations, which are many in Chennai, should be given the utmost consideration (it should be noted here that the temple community will not only include the caste or temple's clan but should include users).

It should also be noted that a) for the historic temple locations, the contemporary temple community should include both local and non-local temple users, rather than just from the same locality, which is the traditional way to analyse community usage and b) for new settlements, the site for religious worship should be decided through in-depth local participation.

#### C. The six temple locations (synergistic relationship - core temples)

The six temple locations of Mylapore, Thiruvannamur, Velacherry, Vadapalani, Nungambakkam, Villivakkam and Thiruvettriur are realised for competitive spatial and social potentialities. These locations attract public interest and are significant locations for retail activity in a particular typology (typology 1). Such competitiveness or equality must be appreciated to obtain balanced urban design frameworks at these locations. One option could be to 'connect' these locations by promoting similar functions and the spatial articulation.

### 2) The temple-locations of Classification 2 – symbiotic relationship

These temples need immediate conservation attention, in terms of spatial integration and land use. One simple way could be to integrate transport and land use to conform to each other. That is:

- The strategic transportation and traffic networks could be improved by reducing the Space Syntactic values to medium by cutting the connectivity of the temple-street and by increasing the connectivity of the adjoining streets to encourage more movement around this area. This would enable the location to be still valid in the city and yet commercialisation might be distributed in the area rather than its being concentrated on just one street and therefore, it would create a commercial 'district' in the near future.
- A mitigated commercial land use of the temple-street is recommended.

### **3) The temple-locations of Classification 3 – dysergic relationship**

These temples are not used as potential public places in the spatial articulation and hence, they are in need of attention as public spaces in the locality. It is recommended, therefore, that:

- To improve the connectivity of the road, the Space Syntactic values should be increased to medium;
- The land use should be changed to residential, primarily, to accommodate local employees.
- Retail – should be approved/promoted to conform to the synergistic relationship mentioned above (point 1, A.).

#### **7.5.2 General recommendations**

##### **1) Spatial planning - integration of transportation and land use**

Since the retail logic of the city has hitherto followed Space Syntactic values and the arterial roads connecting to the historical temple locations, it is recommended that future retail proposals should follow this pattern to minimise any chaotic situation of urban land use. That is, the high rise and high density commercial development may be provided in these highly integrated streets (the exception is the streets mentioned above, in point 2) and on the connecting arterial roads; and the second or medium density could be the next or adjoining streets; and lastly, the temple streets should be kept for the sale of religious commodities only.

The thesis wishes to remind the Chennai planning authorities that the integration of land use with transportation is also equally valid and vice versa. While integrating transportation with existing land use is (a) the draft plan's final objective (page 61), this thesis recommends the integration and promotion of land uses that conform to the transport facilities (b). The latter case (b) is the one that the city has been following so far (as mentioned above) and is cost-effective and simple rather than the former (a) which is expensive and complex.



## **2) Temple tanks – the realisation of the tanks' spatial potential**

The thesis found that the spatial potential of the tanks promotes a synergistic relationship with the local urban settlement - a local landscape element that is as good as the community parks of European countries. The temple tanks are realised as valid, lively and focal urban open spaces, an aesthetic urban element and not to be discarded as dumping sewerage disposal lands (<http://www.hindu.com/2007/02/08/stories/2007020818620500.htm>). The spatial potential of these tanks should be highlighted in the urban landscape by improving these spaces through visual and physical accessibility.

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## Appendix 1

### 1.1 Urbanisation in pre-British India\*

Pre-modern urbanisation in India/South Asia evolved in three stages (Allchin, 1995):

- The first phase: the proto-historic cities of the Harappan/Indus Valley culture – 2300-1700 BC
- The second phase: centred in the Ganges valley, 500 BC to AD 300.
- The third phase: when it became an all-India phenomenon (AD 300-600) (Champakalakshmi, 1996), though in north India, it was the Turkish Imperial rule that took its legacy into Delhi AD 1200) urban settlement patterns with commercial and administrative connections (Nanda, 1996).

The urban character of the first phase is recognisable in the hierarchy of settlement sites, in the planned cities, in the urban infrastructure provided at Mohenja-daro, their design, street grid system and modulated dimensions, from the streets to the brick size, monumental architecture and orientation. The major part of the subcontinent remained unaffected by this early urbanism which left no legacy beyond the middle of the second millennium BC (Champakalakshmi, 1996; Allchin, 1995). Therefore the next phase is fundamentally a new phenomenon.

The second or the early historical phase: this phase was from the sixth century BC to the third century AD. With its epicentre in the Ganges valley (Allchin, 1995), it witnessed a process of internal development with “long-distance trade, political centralisation and Buddhist ritual integration” (Nanda, 1996). It spread over the whole of north India by the third century BC, over Central India, Deccan and the Andhra region between the second century BC and third century AD. This is the earliest urbanisation in the south India and it became eventually an all-India phenomenon. The spread of this network into the Deccan, the south India, was undoubtedly brought about by overland trade links, mainly maritime, from the third century BC and the expansion of the Mauryan state. The *varna* of the Vedic period (refer Appendix I), and the prevailing trade induced a ‘Caste-trade-status based development’ (Gandhi, 1973) that had been the principle of the village plans.

By then, in south India the urban forms appeared due to the spread of this trade and associated commercial activities. For South India, this period represents the first phase of urbanisation, which is explained below.

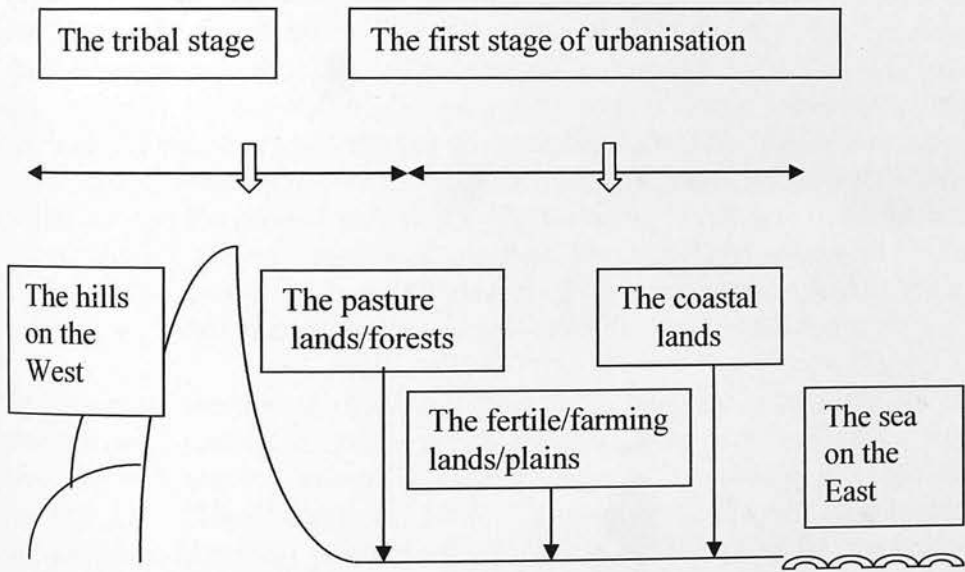
\* The sections 1.1 to 1.3 of Appendix 1 cover the pre-British period up to AD 900 and the urbanisation process from AD 900 is explained in the Section 2 of Chapter 4 under ‘the temple urbanism’.

1.2 The early or the first urbanisation phase of the Tamil country, 300 BC to AD 600

The first phase of urbanisation is attributed to the expansion of the Mauryan (a north Indian dynasty) and external trade. In the Deccan, the catalyst for this first phase of urbanisation were trade and commerce due to both long-distance and local exchanges. Though this phase is marked by a lack of enduring structures in south India, it is worth studying for the following reasons:

- the socio-economic and political life of this phase influence the next: external trade, local agriculture and the then prevailing relationship between the ruled and rulers (which resulted in the feudalism of the second phase).
- the spatial zoning of this urbanisation based on the local landscape (the five *Tinai*s (see below), had dual urban centres, an inland capital and a coastal port, and also had particular significance in the next phase of urbanisation.

The Sangam literature praised the Tamil landscape with the five *Tinai*s (or the five typologies) which provided a continuity with the then Tamil ethos. The five *Tinai*s were: *Mullai* (pasture lands), *Kurunjci* (hillside), *Paalai* (desert landscape) *Marutam* (farming lands), and *Neital* (the coast). Of those, the desert landscape concerned with disruption of love life was excluded from being given a definite inner ecology as the geography was devoid of any.



The Tamil landscape and the five *Tinai*s

In the Sangam period, Tamil literature defines the lands as ‘marutam’ – marked by an inland town of political and commercial importance and ‘neital’ – marked by a coastal town of commercial importance. It is possible that the impact of trade, particularly maritime trade, led to an intensification of inter-*tinai* exchange, which in turn could have

provided an incentive for extracting the 'surplus' of agricultural tracts and channelling it towards trade (Champakalakshmi, 1996).

The Sangam literature sees them as representing different layers of poetry and at least two levels of social organisation, i.e., the tribal stage persisting on the fringes of agricultural land (*the mullai tinai*) and the hill regions (*the kurunci tinai*) regions, and the first stage of urbanisation that developed in the agricultural inland (*the marutam tinai*) and the coastal land (*the neital tinai*). This process stopped suddenly around AD 600, due to the decline of trade, the lack of any institutional coherence and a resource base to fall back upon in a crisis.

### 1.3 Trade, landscape and urbanisation

#### Local resources and trade - inter-Tinai exchange

The socio-economic potential of the landscape influenced the trade and therefore the location of urban settlements. Two kinds of trade networks were identified during the period of first urbanisation; inland and foreign. The inland trade basically relied on the hilly, pasture and coastal landscapes. To explain, the hilly areas particularly rich in aromatic wood – exported outside Tamil region. A symbiotic relationship developed between these and the inland and coastal tracts. In return for rice and salt, the people of the inland and coastal tracts acquired the rich resources of the hilly tracts. The Cola attempted to gain access to the pearl fisheries of the Pandaya coast and the rich pepper areas of the Cera. The fringes of settled agricultural tracts (*the mullai tinai*) represented a transitory ecological zone and could gradually have merged with the latter with the expansion of agricultural and irrigation facilities. On the other hand, the foreign network trade located on the coasts and relied on sea-transportation network. The more commercially active and organised towns were *pattinams* located on the coast. This accounts for the fewer and sparser urban settlements in the interior and their presence only in the *marutam* and *neital* tracts. In other words the inland plains had the royal centres and social life and the coastal area was a port for trade. Mayillapur in the second century AD, a settlement in Chennai region of that time, was a port and settlement for the traders. The inland towns could, at best, be described as consumption points, though there was evidence of textile manufacturing centres (Uraiyur and Coimbatore).

By this time, the society needed a formalised religious system and its universalisation through acculturation, a system which could combine in it many of the folk and popular elements with the *Puranic* tradition that swept the sub-continent by the end of the sixth century AD (Champakalakshmi, 1996). The end of the second phase is a reference point for the early historical period and provides a starting point for the protagonists of the theory of 'Indian feudalism', i.e., a new socio-economic formation, based on a land-grant system. There existed the 'temple urbanism'.



## 1.4 Urban chaos in British Madras

The important thing that never let Madras grow as other colonial cities like Bombay and Calcutta, was the political wars during the 19<sup>th</sup> century, between the French and English who already had their settlements in and around Madraspattinam.

The colonial and indigenous house-types reflected distinctly different urban images. As the city grew, the colonial settlements were of bungalows set in wide, tree-lined streets, private and public gardens and parks - the familiar designs of the West. In the Black Town settlements, the originally planned wide streets were narrowed by the locals for they built additions onto the front of houses to accommodate more people. The temple villages had the most typical, indigenous wealthy house-type of the courtyard house, built on a square or rectangular plan with rooms running around a central courtyard.

The longest road, Mount Road or Anna Salai, of the city now appeared connecting the Fort with the Portuguese settlement of San Thome and the British cantonment settlement at the St. Thomas Mount. The development and maintenance of colonial settlements placed a great drain on the resources of the city which led to a growing inequality in the civic amenities of the different sectors of the city. The wealthy colonists bought large pieces of the urban which made the city an amalgamation of crowded settlements and wide open spaces even at its centre.

The uncontrolled growth of the city population created many problems with respect to roads, sanitation, market places, drinking water and educational facilities which are the basic amenities of modern life. It was Lord Pentland, the Governor of Madras from 1912-1919, who invited Patrick Geddes, an eminent British town planning architect to visit Madras to advise the municipal authorities in 1914. Patrick Geddes, who was later called the 'father of town planning in Madras city', found himself in the midst of a major political upheaval and cultural revival in the city. During his stay, from 1914-1916, Geddes focused on survey of several slums of the urban poor rather than any surface level urban design proposals. While leaving, Geddes suggested H V Lanchester, one of the vice-presidents of RIBA should be an official town planning adviser for Madras. Patrick Geddes and H V Lanchester were mainly responsible for persuading the government of Madras to pass the historic Madras Town Planning Act, 1920 which established, for the first time, positive attitudes for including urban issues in public policy (Sundaram, 2006).

In his report on Town planning in Madras (1916), Lanchester proposed the development of Madras city through surface drainage, railway development, road system, tramways, groupings of principle buildings, housing developments, provision for open spaces, educational facilities, hygienic considerations, commercial developments, financial resources, administration and control. The proposal was never implemented but Lanchester's study was a useful publication for the future town planners of the city.

## Appendix 2

### 2.1 List of 36 case-study temples

Temple number	Name	Location	Location number	Scale of retail activity
1	Sri Marundeeswar temple	Thiruvannamur	1	1
2	Sri Dandeeswarar temple	Velacherry	2	2
3	Sri Karneeswarar temple	Saidapet	3	1
4	Sri Prasanna Venkata Perumal temple	Saidapet	3	3
5	Sri Siva Vishnu temple	T.Nagar	4	1
6	Sri Kothandara temple	T. nagar	4	3
7	Sri Valleswarar temple	Valasarawalkam	5	1
8	Sri Vadapalai Andavar temple	Vadapalani	6	1
9	Sri Kesava Perumal temple	Mylapore	7	3
10	Sri Kapaleeswarar Temple temple	Mylapore	7	1
11	Sri Madhava Perumal temple	Mylapore	7	3
12	Sri Virupatcheeswarar temple	Mylapore	7	3
13	Sri Parthasarathy temple temple	Triplicane	8	2
14	Sri Thiruvatteeswarar temple	Triplicane	8	2
15	Sri Agatheeswarar & Sri Prasanna Venkatesa Perumal temple	Nungambakkam	9	2
16	Sri Adhipureswarar and Sri Adhikesava Perumal Sri Temples	Chindadripet	10	2
17	Sri Gangadeeswarar temple	Pursaiwalkam	11	2
18	Sri Angala Parameswari Amman and Kasi Viswanathar temple	Choolai	11	2
19	Sri Adhimottaiamman & Sri kandasamy temple	Kosapet	11	2
20	Sri Kandaswamy temple	George Town	12	1
21	Sri Ekambareeswarar temple	George Town	12	1
22	Sri Chenna Kesava Perumal and Chenna mallikeswarar temple	George Town	12	1
23	Sri Kachaleeswarar temple	Muthialpet George Town	12	1
24	Sri Mallikeswarar temple	Muthialpet George Town	12	2
25	Sri Kasiwiswanathan temple	Peddanaickanpet	12	2

26	Sri Krishnan temple	George Town	12	2
27	Sri Chengaluneer Pillayar temple	George Town	12	3
28	Sri Parasuramalingeswarar temple	Ayanavaram	13	2
29	Sri Kasiviswanathaswamy temple	Ayanavaram	13	3
30	Sri Agastheeswarar temple	Villivakkam	14	2
31	Sri Sowmiya Dhamodara Sri temple	Villivakkam	14	3
32	Sri Angalaparameswari temple	Royapuram	15	2
33	Sri Raveeswarar temple	Vysarpadi	16	2
34	Sri Arunchaleswarar temple	Tondaiyarpuram	15	1
35	Sri Kalyanavenkateswara Perumal temple	Kaladipet	17	1
36	Sri Thyagaraja Swamy temple	Thiruvotriyur	17	1



## Appendix 2.2

### Spatial and social contexts of the 36 case-study temples

1	Sri Marundeeswarar Temple	Thiruvannamur
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Spatial context	
Number and name of the temple	1: Sri Marundeeswarar Temple
Location	Thiruvannamur
Scale of commercial activities	Scale 1
Predominant local land use	Mixed
Tank position in relation to the street	Facing the major roads
Function of the temple street	Connecting major road and the local street
Local landmarks	Transportation and temples
Temple position in relation to the street	'T' junction
Space Syntax data	
Level of Global Integration values	Lowest
Level of Local Integration values	Medium
Social context	
Period of building the temple	Pre-British: 7 <sup>th</sup> Century AD
Religious sect	The Saivates – Sect 1
Built by	Locals during Chola period Patronised by Saints
Annual festivals	Brahmotsavam in March and April for 10-11 days Tiruvadhirai in Dec-Jan including the 18 dances festival.
Miracles	One of the 32 holy sites ( <i>Tevara</i> Sthalams); God appeared beneath the <i>Vilva</i> tree
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	Yes

2	Sri Dandeewarar Temple	Velacherry
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Spatial context	
Number and name of the temple	2: Sri Dandeewarar Temple
Location	Velacherry
Scale of commercial activities	Scale 2
Predominant local land use	Residential and Institutional
Tank position in relation to the street	Facing major roads
Function of the temple street	Connecting local road to the temple
Local landmarks	Temples
Temple position in relation to the street	End of the street
Space Syntax data	
Level of Global Integration values	Lowest
Level of Local Integration values	Medium

Social context	
Period of building the temple	British
Religious sect	The Saivates – Sect 1
Built by	Locals
Annual festivals	Brahmotsavam and Car Festival
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



3	Sri Karneeswarar Temple	Saidapet
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Spatial context	
Number and name of the temple	3: Sri Karneeswarar Temple
Location	Saidapet
Scale of commercial activities	Scale 1
Predominant local land use	Mixed residential
Tank position in relation to the street	Facing local streets
Function of the temple street	Connecting two local streets
Local landmarks	Transportation service, temples
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Lowest

Social context	
Period of building the temple	Pre-British
Religious sect	The Saivates – Sect 1
Built by (Type A)	Caste - Sengunthar of the locality
Annual festivals	Vasantha ursaravam in April-May Skandasashti in Oct-Nov Arudhra in Dec-Jan
Visitors during the festivals	10,000 devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



4	Sri Prasanna Venkata Perumal	Saidapet
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Spatial context	
Number and name of the temple	4: Sri Prasanna Venkata Perumal Temple
Location	Saidapet
Scale of commercial activities	Scale 3
Predominant local land use	Residential
Tank position in relation to the street	Inside the temple
Function of the temple street	Connecting two local streets
Local landmarks	Temple
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Lowest
Level of Local Integration values	Lowest

Social context - Source Census 1967	
Period of building the temple (Type a)	Pre-British: 12 Century AD
Religious sect	The Vaishnavates – sect 2
Built by	Vijayanagara Dynasty
Annual festivals	Vaikuntayekadesi in Dec-Jan
Visitors during the festivals	50 local devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-

5	Sri Siva Vishnu Temple	T.Nagar
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Spatial context	
Number and name of the temple	5: Sri Siva-Vishnu Temple
Location	Thiyagaraya Nagar (T.Nagar)
Scale of commercial activities	Scale 1
Predominant local land use	Commercial
Tank position in relation to the street	Inside the temple
Function of the temple street	Main road connecting the city
Local landmarks	Transportation service, temples, schools
Temple position in relation to the street	On the side
Space Syntax data	
Level of Global Integration values	Highest
Level of Local Integration values	Highest

Social context	
Period of building the temple	British
Religious sect	Both sects - Saivates and Vaishnavates
Built by	Social club – Mambalam Sanmargh Samvardhini Sabha
Annual festivals	Navarathiri and Sivrathiri for Saivates Vaikuntayegadesi and Sriramanavami for Vaishnavates
Visitors during the festivals	100,000 devotees from the city and adjacent villages
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



6	Sri Kothandara Temple	T. nagar
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Spatial context	
Number and name of the temple	6: Sri Kothandara Temple
Location	Thiyagaraya Nagar (T.Nagar)
Scale of commercial activities	Scale 3
Predominant local land use	Residential
Tank position in relation to the street	Inside the temple
Function of the temple street	Connecting local roads
Local landmarks	Hardly any
Temple position in relation to the street	On the side
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Lowest

Social context	
Period of building the temple	British: 120 years ago
Religious sect	The Vaishnavates – sect 2
Built by	Individual - Sri Ventakavardha Das
Annual festivals	Brahmotsavam for 10 days in May-June Floating festival for 3 days in Feb-March Panguniuthiram in Mar-April
Visitors during the festivals	Several people from neighbouring villages
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



7	Sri Valleswarar temple	Valasarawalkam
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Spatial context	
Number and name of the temple	7: Sri Valleswarar Temple
Location	Valasarawalkam
Scale of commercial activities	Scale 1
Predominant land use	Residential
Tank position in relation to the street	Inside the temple
Function of the temple street	The temple is on the main road
Local landmarks	Transportation service, temples, hospital, schools
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Highest

Social context	
Period of building the temple	Pre-British: 12 <sup>th</sup> Century AD
Religious sect	The Saivates – sect 1
Built by	Chola Dynasty
Annual festivals	Brahmotsavam and car festival
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



### Spatial context

Number and name of the temple	8: Sri Vadapalani Andavar Temple
Location	Vadapalani
Scale of commercial activities	Scale 1
Predominant local land use	Mixed residential
Tank position in relation to the street	Facing the local roads
Function of the temple street	Connecting the main road and the local streets
Local landmarks	Transport facilities and temples
Temple position in relation to the street	'T' junction
Space Syntax data	
Level of Global Integration values	Highest
Level of Local Integration values	Highest

### Social context

Period of building the temple	British - 110 years ago
Religious sect	The Saivates – Sect 1
Built by	Locals
Annual festivals	Karthigai asterism day every month, Skandhasashti in Oct-Nov and Panguniuthiram in Mar-April
Visitors during the festivals	10,000 to 20,000 devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	Yes



9	Sri Kesava Perumal Temple	Mylapore
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Spatial context	
Number and name of the temple	9: Sri Kesava Perumal Temple
Location	Mylapore
Scale of commercial activities	Scale 3
Predominant land use	Residential
Tank position in relation to the street	Partly facing the local roads and partly not accessible
Function of the temple street	Connecting to the local streets
Local landmarks	Temples
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Lowest

Social context	
Period of building the temple	Pre-British: 9 century AD
Religious sect	The Vaishnavates – sect 2
Built by	Pallava Dynasty
Annual festivals	Peyalvar Utsavam in Oct-Nov for 10 days Brahmotsavam in Mar-April for 2 days
Visitors during the festivals	1,000
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



10	Sri Kapaleeswarar Temple	Mylapore
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Spatial context	
Number and name of the temple	10: Sri Kapaleeswarar Temple
Location	Mylapore
Scale of commercial activities	Scale 1
Predominant local land use	Mixed residential
Tank position in relation to the street	Facing the major road
Function of the temple street	Connecting the main road and the local streets
Local landmarks	Transport, social clubs and temples
Temple position in relation to the street	'T' junction
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Lowest
Social context	
Period of building the temple	Pre-British
Religious sect	The Saivates – Sect 1
Built by	Firstly by <i>Nagarattar</i> , later by <i>Mayilainattu Muthiappa Mudhaliyar</i>
Annual festivals	Many throughout the year Brahmotsavam in Mar-April Car Festival in Apr-May
Visitors during the festivals	200,000
Stories and miracles	Many; One of the 32 holy sites ( <i>Tevara Sthalams</i> )
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	Yes

11	Sri Madhava Perumal Temple	Mylapore
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Spatial context	
Number and name of the temple	11: Sri Madhavaperumal Temple
Location	Mylapore
Scale of commercial activities	Scale 3
Predominant land use	Residential
Tank position	Inside the temple
Function of the temple street	Connecting the local streets
Local landmarks	Temples
Temple position in relation to the street	'T' junction
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Lowest

Social context	
Period of building the temple	British – 340 year ago
Religious sect	Vaishnavates – Sect 2
Built by	Patronised by local saints and donors
Annual festivals	Brahmotsavam in Apr-May for 10 days Peyalwar Festival in Oct-Nov for 10 days
Visitors during the festivals	500 local devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



12	Sri Virupatcheeswarar Temple	Mylapore
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Spatial context	
Number and name of the temple	12: Sri Virupatcheeswarar Temple
Location	Mylapore
Scale of commercial activities	Scale 3
Predominant land use	Residential
Tank position in relation to the street	Inside the temple
Function of the temple street	Ends at the temple
Local landmarks	Temples
Temple position in relation to the street	End of the street
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Lowest

Social context	
Period of building the temple	Pre-British
Religious sect	The Saivates – Sect 1
Built by	Managed by individual
Annual festivals	Skandasashty, Navarathri and Sivarathri
Visitors during the festivals	100 local devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



13	Sri Parthasarathy temple	Triplicane
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Spatial context	
Number and name of the temple	13: Sri Parthasarathy Temple
Location	Triplicane
Zone classification	Residential
Scale of commercial activities	Scale 2
Tank position in relation to the street	Facing the local streets
Function of the temple street	Connecting the main road to the local streets
Local landmarks	Schools, temples
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Medium
Social context	
Period of building the temple	Pre-British – 9th Century AD
Religious sect	The Vaishnavates sect 2
Built by	Pallava Dynasty
Annual festivals	Throughout the year Vaikuntayekadesi in Dec-Jan for 20 days, Floating festival for 7 days and Brahmotsavam for 10 days.
Visitors during the festivals	40,000 to 50,000
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	Yes



#### Spatial context

Number and name of the temple	14: Sri Thiruvatteeswarar Temple
Location	Triplicane
Zone classification	Residential
Scale of commercial activities	Scale 2
Tank position in relation to the street	Inside the temple
Function of the temple street	Connecting the local streets
Local landmarks	Schools, temples
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Highest
Level of Local Integration values	Medium

#### Social context

Period of building the temple	Pre-British
Religious sect	The Saivates – Sect 1
Built by	Royal - Nawab of Arcot
Number of festivals	Brahmotsavam in Apr-May for 10 days.
Visitors during the festivals	500 devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



15	Sri Agastheeswarar & Sri Prasanna Venkatesa Perumal Temples	Nungambakkam
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Spatial context	
Number and name of the temple	15: Sri Agastheeswarar & Sri Prasanna Venkatesa Perumal Temple
Location	Nungambakkam
Scale of commercial activities	Scale 2
Predominant land use	Residential and Institutional
Tank position in relation to the street	Facing the local streets
Function of the temple street	Connecting the main road and the local streets
Local landmarks	Temples, schools
Temple position in relation to the street	Sides of the roads
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Medium

Social context	
Period of building the temple	Pre-British
Religious sect	Both sects - Saivates and Vaishnavates
Built by	King Bommarajan
Annual festivals	Arudhra for Sivan Vaikuntayedesi for Vishnu
Visitors during the festivals	1,000 devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	Yes



16	Sri Adhipureswarar and Adhikesava Perumal Temples	Chindadripet
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Spatial context	
Number and name of the temple	16: Sri Adhipureswarar and Adhikesava Perumal Temple
Location	Chindadripet
Scale of commercial activities	Scale 2
Predominant local land use	Residential
Tank position in relation to the street	Inside the temple
Function of the temple street	Connecting the main road and the local streets
Local landmarks	Transport and temples
Temple position in relation to the street	Sides of the temple
Space Syntax data	
Level of Global Integration values	Highest
Level of Local Integration values	Medium

Social context	
Period of building the temple	350 years ago – British period
Religious sect	Both sects - Saivates and Vaishnavates
Built by	Individual - Dubash, East India Company
Annual festivals	Many
Visitors during the festivals	2000 local devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-

17	Sri Gangadeeswarar Temple	Pursaiwalkam
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Spatial context	
Number and name of the temple	17: Sri Gangadeeswarar Temple
Location	Purasaiwalkam
Scale of commercial activities	Scale 2
Predominant land use	Mixed residential
Tank position	Inside the temple
Function of the temple street	Connecting to the main road
Local landmarks	Shopping malls, temples
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Highest
Level of Local Integration values	Medium

Social context	
Period of building the temple	Pre-British (8 <sup>th</sup> Century AD)
Religious sect	The Saivates – Sect 1
Built by	Locals
Annual festival	Brahmotsavam
Visitors during the festivals	500 to 1000 devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	Yes



18	Sri Angala Parameswari Amman and Sri Kasi Viswanathar Temple	Choolai
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Spatial context	
Number and name of the temple	18: Sri Angala Parameswari Amman and Kasi Viswanathar Temple
Location	Choolai
Scale of commercial activities	Scale 2
Tank position in relation to the street	Inside the temple
Predominant local land use	Residential
Function of the temple street	Connecting to the main road to the local streets
Local landmarks	Schools, temples
Temple position in relation to the street	'T'
Space Syntax data	
Level of Global Integration values	Highest
Level of Local Integration values	Medium

Social context	
Period of building the temple	British – 340 years ago
Religious sect	The Saivates – Sect 1
Built by	-
Number of festivals	Arudhra in Dec-Jan, Brahmotsavam in Feb-March for 10 days, Navarathriri in Sep-October and Sri Manickavasagar Uthsavam in Dec-Jan for 20 days.
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



19	Sri Kandaswamy and Adhimottaiamman Temple	Kosapet
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Spatial context	
Number and name of the temple	19: Sri Kandaswamy and Adhimottaiamman Temple
Location	Kosapet
Scale of commercial activities	Scale 2
Predominant local land use	Residential
Tank position in relation to the street	Partly facing local street and partly by buildings
Function of the temple street	Connecting the local streets
Local landmarks	Schools, temples
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Highest
Level of Local Integration values	Medium

Social context	
Period of building the temple	British, Year 1700
Religious sect	The Saivates – Sect 1
Built by	Locals – Potter caste
Annual festivals	Brahmotsavam for 11 days, Panguni Uttiram for 1 day, Skandasashti for 6 days and Arudhra for 10 days.
Visitors during the festivals	From 10,000 to 50,000 devotees.
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



### Spatial context

Number and name of the temple	20: Sri Kandaswamy Temple
Location	George town
Zone classification	Commercial
Scale of commercial activities	Scale 1
Tank position in relation to the street	Inside the temple
Function of the temple street	CBD
Local landmarks	Transportation service, temples, schools
Temple position in relation to the street	On the side
Space Syntax data	
Level of Global Integration values	Highest
Level of Local Integration values	Highest

### Social context

Period of building the temple	British
Religious sect	Saivates – Sect 1
Built by	Caste- Group of people of Chettiyar caste
Annual festivals	Many
Miracles	The Idol identified by the God Himself
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



21	Sri Ekambareeswarar Temple	George Town
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Spatial context	
Number and name of the temple	21: Sri Ekambareeswarar Temple
Location	George Town
Scale of commercial activities	Scale 1
Predominant local land use	Mixed residential
Tank position in relation to the street	Inside the temple
Function of the temple street	Connect the CBD and the local residential street
Local landmarks	Transportation service, temples, schools
Temple position in relation to the street	At the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Highest

Social context	
Period of building the temple	British
Religious sect	The Saivates – sect 1
Built by	Individual – Sri Alangatha Pillai Chief Merchant, East India Company
Annual festivals	Many Brahmotsavam in Mar-April Arudhra in Dec-Jan
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	Yes



22	Sri Chenna Kesava Perumal and Chenna mallikeswarar Temples	George Town
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Spatial context	
Number and name of the temple	22: Sri Chenna Kesava Perumal and Chenna mallikeswarar Temple
Location	George Town
Scale of commercial activities	Scale 1
Predominant local land use	CBD
Tank position in relation to the street	Inside the temple
Function of the temple street	Connect a major road to a local street.
Local landmarks	Transportation service, temples, schools
Temple position in relation to the street	At the side
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Highest

Social context	
Period of building the temple	British
Religious sect	Both sects - Saivates and Vaishnavates
Built by	Individual with support of the British government - Sri Manai Muthukrishna Mudaliar, Chief Merchant, East India company
Annual festivals	Many
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-

23	Sri Kachaleeswarar Temple	Muthialpet George Town
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#### Spatial context

Number and name of the temple	23: Sri Kachaleeswarar Temple
Location	Muthialpet, George Town
Scale of commercial activities	Scale 1
Predominant local land use	CBD
Tank position in relation to the street	Inside the temple
Function of the temple street	Connect a major road to a local street.
Local landmarks	Transportation service, temples, schools
Temple position in relation to the street	'T' junction
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Highest

#### Social context

Period of building the temple	British – 290 years ago
Religious sect	The Saivates – Sect 1
Built by	Individual, Vira Ragava Brahman (his uncle was a Dubash with East India Company)
Annual festivals	Brahmotsavam in Apr-May for 10 days
Visitors during the festivals	1000 devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-





### Spatial context

Number and name of the temple	24: Sri Mallikeswarar Temple
Location	Muthialpet, George Town
Zone classification	Mixed residential
Scale of commercial activities	Scale 2
Tank position in relation to the street	Inside the temple
Function of the temple street	Connect a major road to a local street.
Local landmarks	Temples, Bus terminus
Temple position in relation to the street	Streets on three sides of the temple ('squared by')
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Medium

### Social context

Period of building the temple	British – 140 years ago
Religious sect	The Saivates – Sect 1
Built by	Individual – Dubash of the East India Company
Annual festivals	Brahmotsavam for 16 days and St. Manickavasagar Utsavam for 10 days
Visitors during the festivals	300 devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-





### Spatial context

Number and name of the temple	25: Sri Kasiwiswanathan Temple
Location	Peddanaickenpet
Scale of commercial activities	Scale 2
Predominant local land use	Mixed Residential
Tank position	Inside the temple
Function of the temple street	Connecting the main road and the local streets
Local landmarks	Schools, temples
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Medium

### Social context

Period of building the temple	British period - 240 years ago
Religious sect	The Saivates – Sect 1
Built by	Caste: Mudhaliars – Lawyer Sri Chinnithambi Mudaliyar
Annual festivals	Brahmotsavam, Arudhra and Karthigai
Visitors during the festivals	300 devotees.
Serving afternoon meals for the poor and disabled (Annadanam Scheme by HRCE)	-



### Spatial context

Number and name of the temple	26: Sri Krishnan Temple
Location	George Town
Scale of commercial activities	Scale 2
Predominant local land use	Mixed residential
Tank position in relation to the street	Inside the temple
Function of the temple street	Connecting main road of the CBD and the local residential street
Local landmarks	Temples
Temple position in relation to the street	At the T junction
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Medium

### Social context

Period of building the temple	British
Religious sect	The Vaishnavates – sect 2
Built by	Merchants of the Right Hand castes
Annual festivals	Brahmotsavam for 10 days and Vaikuntayekadesi for 21 days
Visitors during the festivals	300 devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-





### Spatial context

Number and name of the temple	27: Chengaluneer Pillayar
Location	George Town
Scale of commercial activities	Scale 3
Predominant local land use	Residential
Tank position in relation to the street	Inside the temple
Function of the temple street	Connecting two local residential streets
Local landmarks	Temples
Temple position in relation to the street	At the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Medium

### Social context

Period of building the temple	British – 240 years ago
Religious sect	The Saivates – sect 1
Built by	Locals - Caste – fishermen
Number of festivals	Vinayagar Chadurthi, Vasantha UTsavam, Adi Kolor Amman Ursavam each for 10 days
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



28	Sri Parasuramalingeswarar Temple	Ayanavaram
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#### Spatial context

Number and name of the temple	28: Parasuramalingeswarar Temple
Location	Ayanavaram
Scale of commercial activities	Scale 2
Predominant local land use	Residential
Tank position in relation to the street	Partly facing local street and partly by buildings
Function of the temple street	Connecting the main road and local streets
Local landmarks	Temples
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Medium

#### Social context

Period of building the temple	British – 340 years ago
Religious sect	The Vaishnavates – Sect 2
Built by	Locals
Annual festivals	Arudhra in Dec-Jan Anna Abhishekam in Oct-November
Visitors during the festivals	4,000 devotees
Miracles	The Idol appeared by Himself ( <i>Suyambu</i> )
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



### Spatial context

Number and name of the temple	29: Sri Kasiviswanathaswamy Temple
Location	Ayanavaram
Scale of commercial activities	Scale 3
Predominant local land use	Residential and industrial
Tank position in relation to the street	Partly facing local street and partly by buildings
Function of the temple street	Connecting the main road and the local street
Proximity to the local landmarks	Hardly any
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Lowest

### Social context

Period of building the temple	British – AD 1807
Religious sect	The Saivates – Sect 1
Built by	Individuals – 2 Gujarathi ladies
Annual festivals	Brahmotsavam in Apr-May
Visitors during the festivals	Local residents
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-





### Spatial context

Number and name of the temple	30: Sri Agastheeswarar Temple
Location	Villivakkam
Scale of commercial activities	Scale 2
Predominant local land use	Residential
Tank position in relation to the street	Partly by local streets and partly by buildings
Function of the temple street	Connecting the main road and the local streets
Local landmarks	temples
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Highest

### Social context

Period of building the temple	Pre-British: 9 <sup>th</sup> Century AD
Religious sect	The Saivates – Sect 1
Built by	Patronised by a local Saint
Annual festivals	-
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	Yes





### Spatial context

Number and name of the temple	31: Sri Sowmiya Dhamodara Temple
Location	Villivakkam
Zone classification	Residential
Scale of commercial activities	Scale 3
Tank position in relation to the street	Facing local streets
Function of the temple street	Connecting the local streets
Local landmarks	temples
Temple position in relation to the street	'T' and on the sides
Space Syntax data	
Level of Global Integration values	Lowest
Level of Local Integration values	Lowest

### Social context

Period of building the temple	Post-Independence
Religious sect	The Vaishnavates- Sect 2
Built by	-
Number of festivals	Vaikundayegadesi
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-

32	Angalaparameswari	Royapuram
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#### Spatial context

Number and name of the temple	32: Sri Angalaparameswari Temple
Location	Royapuram
Scale of commercial activities	Scale 2
Predominant local land use	Residential
Tank position	Inside the temple
Function of the temple street	Connecting local streets
Local landmarks	Temples
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Medium

#### Social context

Period of building the temple	350 years ago – British period
Religious sect	The Saivates – Sect 1
Built by	Individual – Sri Uthukadu Kuttiappa Achari
Annual festivals	Brahmotsavam for 12 days Navarathiri for 10 days
Visitors during the festivals	2,000 devotees from the neighbouring villages
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-





### Spatial context

Number and name of the temple	33: Sri Raveeswarar Temple
Location	Vysarpadi
Scale of commercial activities	Scale 2
Predominant local land use	Residential
Tank position in relation to the street	Facing the local streets
Function of the temple street	Connecting the main road and the local streets
Local landmarks	temples
Temple position in relation to the street	On the sides
Space Syntax data	
Level of Global Integration values	Medium
Level of Local Integration values	Medium

### Social context

Period of building the temple	-
Religious sect	The Saivates – Sect 1
Built by	-
Annual festival	Arudhra in Dec-Jan
Visitors during the festival	200 local devotees
Miracles	The Idol appeared by Himself
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-





### Spatial context

Number and name of the temple	34: Sri Arunchaleswarar Temple
Location	Tondaiyarpeta
Scale of commercial activities	Scale 1
Predominant land use	Mixed
Tank position	Inside the temple complex
Function of the temple street	Main road in the city
Local landmarks	Schools, Temples
Temple position in relation to the street	On the side
Space Syntax data	
Level of Global Integration values	Lowest
Level of Local Integration values	Highest

### Social context

Period of building the temple	British period - 230 years ago
Religious sect	The Saivates – Sect 1
Built by	Individual – Sri Arunachala Mudhaliar C
Annual festival	Brahmotsavam
Visitors during the festival	500 devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



### Spatial context

Number and name of the temple	35: Sri Kalyanavenkateswara Perumal Temple
Location	Kaladipet
Scale of commercial activities	Scale 1
Predominant land use	Mixed residential
Tank position	Inside the temple complex
Function of the temple street	Connecting the main road and to local roads
Local landmarks	Transport and temples etc
Temple position in relation to the street	'T' and sides
Space Syntax data	
Level of Global Integration values	Lowest
Level of Local Integration values	Highest

### Social context

Period of building the temple	British, AD 1720
Religious sect	Sect 2 – the <i>Vaishnavates</i>
Built by	Individual, British governor, Joseph Collette for his assistant to worship, locally
Annual festivals	Vaikuntayegadesi
Visitors during the festivals	200 devotees
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-





### Spatial context

Number and name of the temple	36: Sri Thiagarayaswami Temple
Location	Thiruvottriyur
Scale of commercial activities	Scale 1
Predominant land use	Mixed
Tank position in relation to the street	Facing the local streets
Function of the temple street	Connecting the main road and the local streets
Local landmarks	Transportation and temples
Temple position in relation to the street	'T' and sides
Space Syntax data	
Level of Global Integration values	Lowest
Level of Local Integration values	Lowest

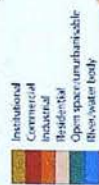
### Social context

Period of building the temple	Pre-British – 9 <sup>th</sup> century AD
Religious sect	The Saivates – sect 1
Built by	Chola Dynasty
Annual festivals	Many Brahmotsavam, Dance of Thiagarayar One of the 32 holy sites ( <i>Tevara</i> Sthalams)
Visitors during the festivals	100,000
Serving afternoon meals for the poor and disabled ( <i>Annadanam</i> Scheme by HRCE)	-



# Spatial Evaluation of the temple locations

## A. Land Use Study

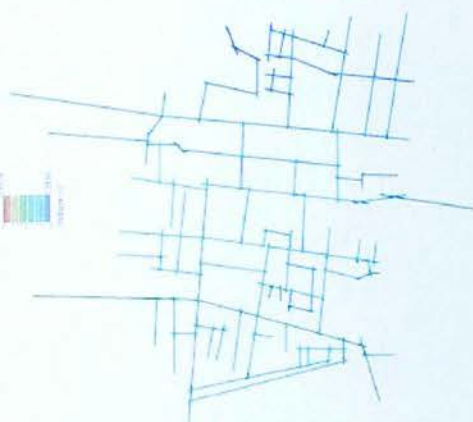


## B. Space Syntax Study

### Local Integration



### Global Integration



The scaling of this drawing cannot be assured

## C. Local use and figure-ground Study



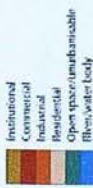
Temple 1



East, West and North Car-streets of Temple 1

## Spatial Evaluation of the temple locations

### A. Land Use Study

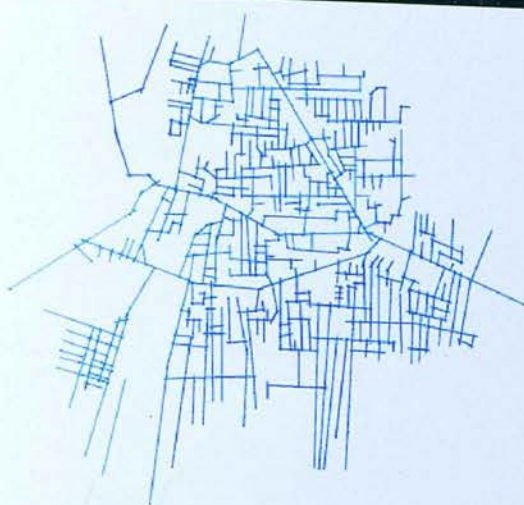


### B. Space Syntax Study

#### Local Integration

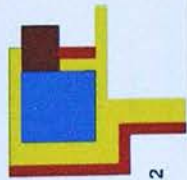


#### Global Integration



The scaling of this drawing cannot be assured

### C. Local use and figure-ground Study



Main streets adjoining the tank of Temple 2

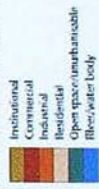


South Car-street of Temple 2



# Spatial valuation of the temple locations

A. Land Use Study

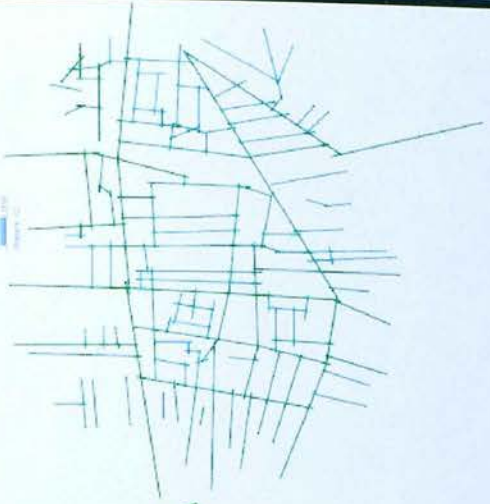


B. Space Syntax Study

Local Integration



Global Integration



The scaling of this drawing cannot be assured

C. Figure-ground Study



Temple 3



Temple 4



East Car-street of Temple 4



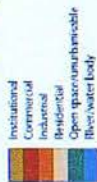
North and South Car-streets of Temple 3





## Spatial Evaluation of the temple locations

### A. Land Use Study



### B. Space Syntax Study

#### Local Integration

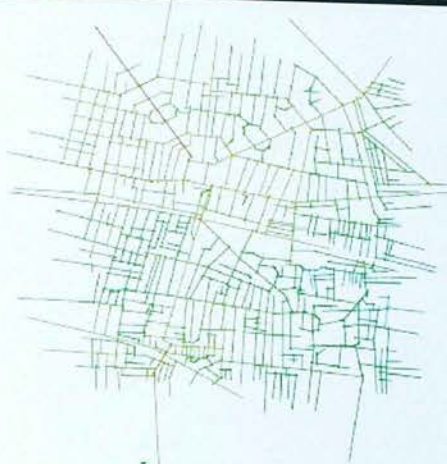


Temple 5

Temple 6

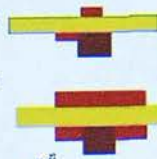


#### Global Integration



The scaling of this drawing cannot be assured

### C. Local use and figure-ground Study



Temple 5 Temple 6



East Car-street of Temple 5

East Car-street of Temple 6

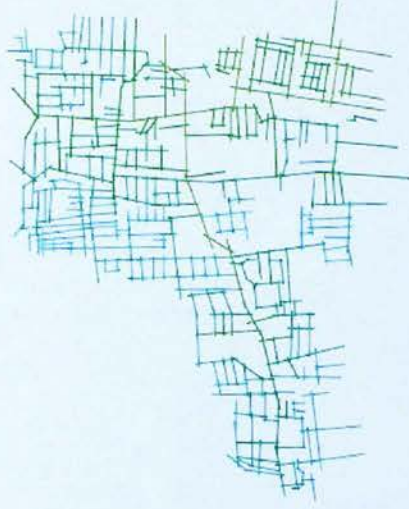
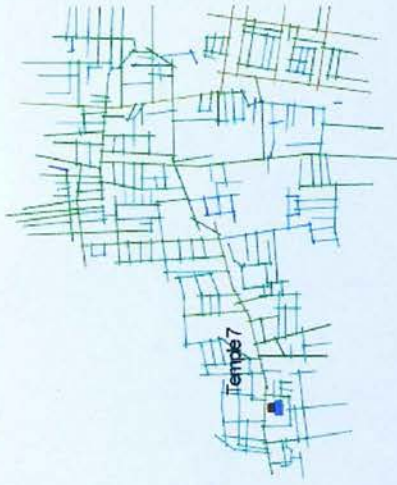
# Spatial Evaluation of the temple locations

Location 5: Valasarawakkam  
Appendix 2-3: Sheet 5

## A. Land Use Study



## B. Space Syntax Study



The scaling of this drawing cannot be assured

## C. Local use and figure-ground Study



South Car-street of Temple 7

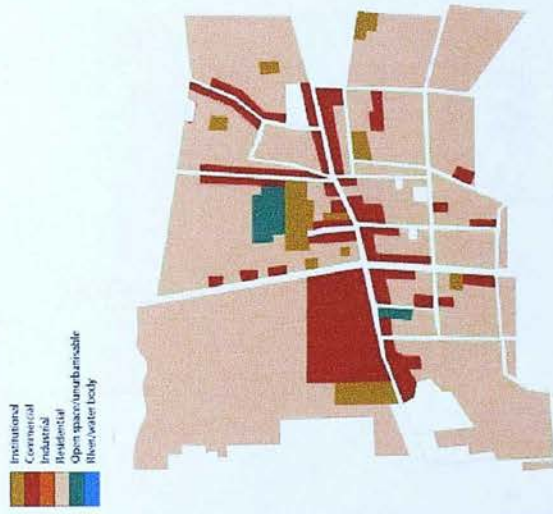
Tank of Temple 7



# Spatial evaluation of the temple locations

Location 6: Vadapalani  
Appendix 2-3: Sheet 6

## A. Land Use Study



## B. Space Syntax Study

### Local Integration



### Global Integration



The scaling of this drawing cannot be assured

## C. Figure-ground Study



Entrance street of the Temple 8



South and North Car-Streets of the Temple 8

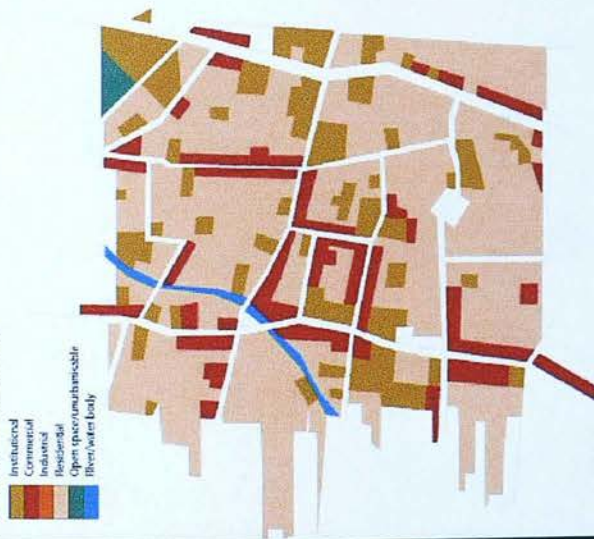




# Spatial Evaluation of the temple locations

Location 7: Myslapore  
Appendix 2-3: Sheet 7

## A. Land Use Study

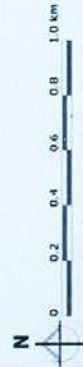
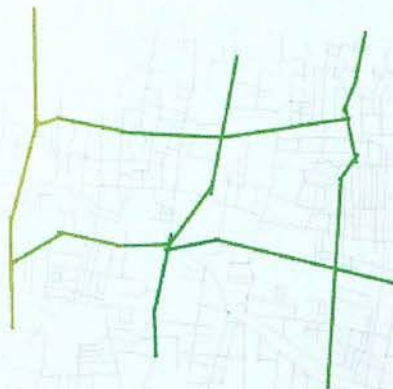


## B. Space Syntax Study

Local Integration

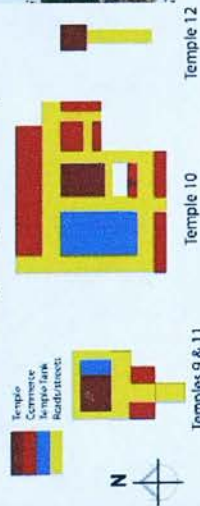


Global Integration



The scaling of this drawing cannot be assured

## C. Local use and figure-ground Study



North and South Car-streets of Temple 10

Temple 10

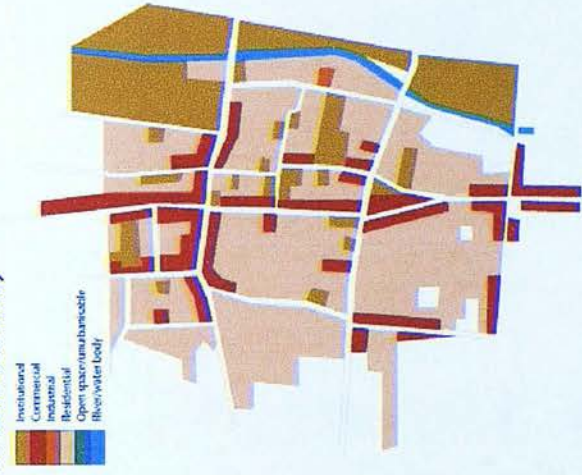
Temple 12

Temples 9 & 11

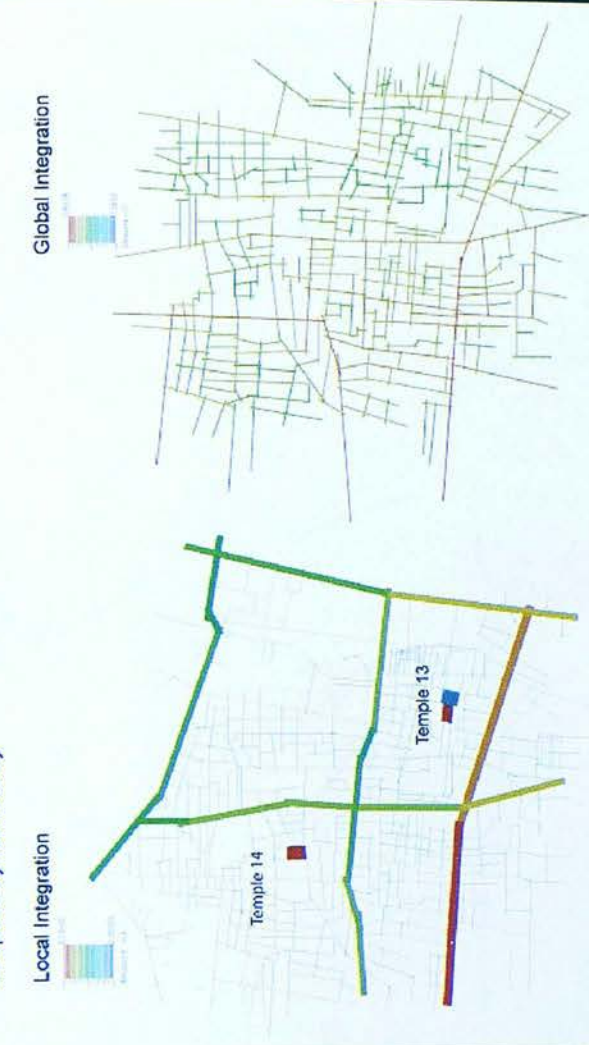
# Spatial evaluation of the temple locations

Location 8: Triplicane  
Appendix 2-3: Sheet 8

## A. Land Use Study



## B. Space Syntax Study



The scaling of this drawing cannot be assured.

## C. Local use and figure-ground Study



South and East Car-street of Temple 13

South and East Car-streets of Temple 14

Temple 18



# Spatial Evaluation of the temple locations

## A. Land Use Study

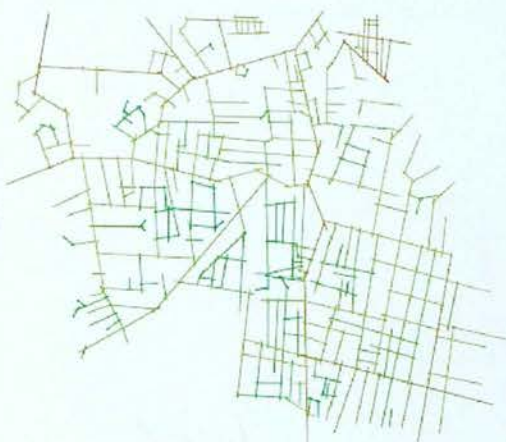


## B. Space Syntax Study

### Local Integration



### Global Integration



The scaling of this drawing cannot be assured

## C. Local use and figure-ground Study



Temple 15



Entrance streets of Temple 15



South and East Car-streets of Temple 15





# Spatial Evaluation of the temple locations

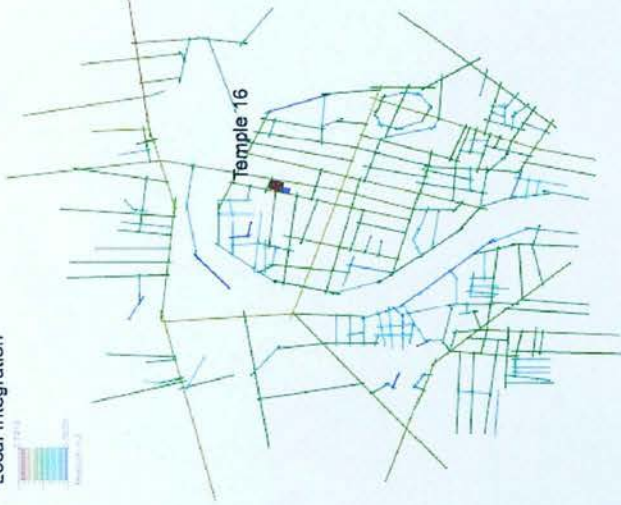
Location 10: Chindadripet  
Appendix 2-3: Sheet 10

## A. Land Use Study



## B. Space Syntax Study

### Local Integration



### Global Integration



The scaling of this drawing cannot be assured.

## C. Local use and figure-ground Study



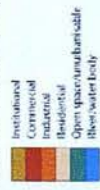
South Car-street of Temple 16



North Car-street of Temple 16

# Spatial Evaluation of the temple locations

## A. Land Use Study

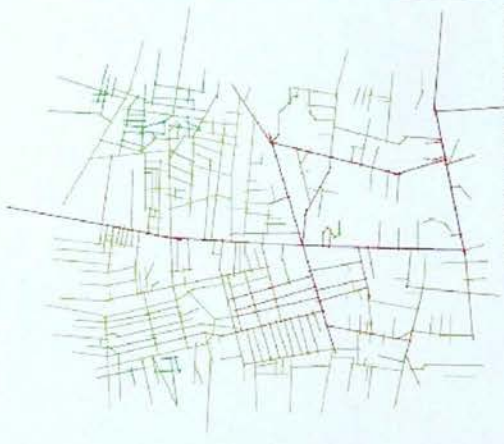


## B. Space Syntax Study

### Local Integration



### Global Integration



The scaling of this drawing cannot be assured.

## C. Local use and figure-ground Study





# Spatial Evaluation of the temple locations

## A. Land Use Study Central Business District (CBD)

## C. Local use and figure-ground Study



Temple 1

Temple 20



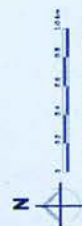
Temple 21



Temple 22

## B. Space Syntax Study

### Local Integration



The scaling of this drawing cannot be assured



Temple 23





# Spatial Evaluation of the temple locations

Location 12: CBD (Cont)  
Appendix 2-3: Sheet 13

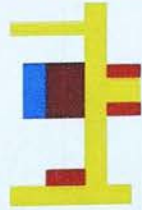
## C. Local use and figure-ground Study



Temple 24



Temple 25



Temple 26



Temple 27



## B. Space Syntax Study

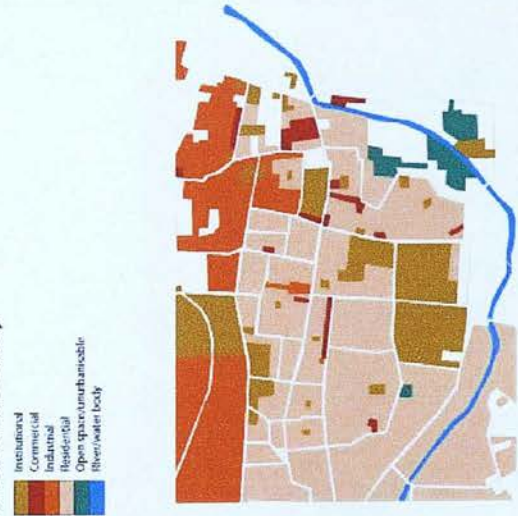
### Global Integration



The scaling of this drawing cannot be assured

# Spatial Evaluation of the temple locations

## A. Land Use Study

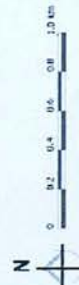


## B. Space Syntax Study

### Local Integration

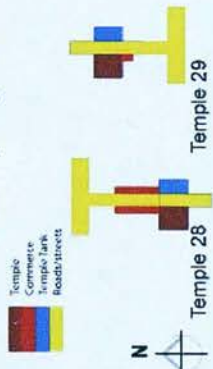


### Global Integration



The scaling of this drawing cannot be assured

## C. Local use and figure-ground Study



East Car-street of Temple 28

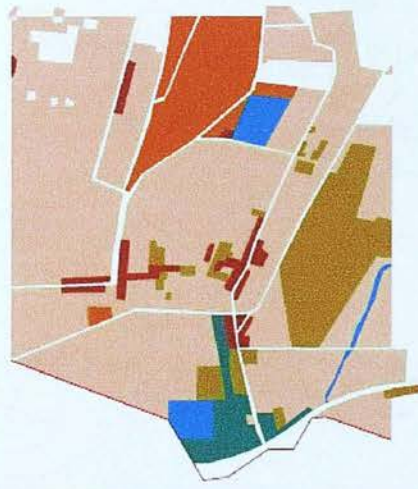
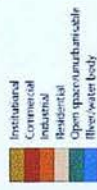
East Car-street of Temple 29



# Spatial Evaluation of the temple locations

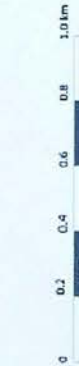
Location 14: Villivakkam  
Appendix 2-3: Sheet 15

## A. Land Use Study

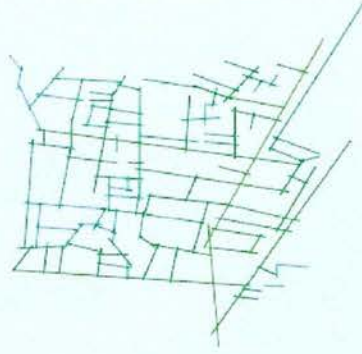


## B. Space Syntax Study

### Local Integration

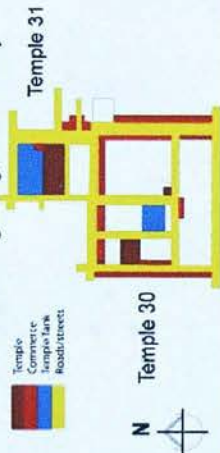


### Global Integration



The scaling of this drawing cannot be assured

## C. Local use and figure-ground Study



Entrance East Car-streets of Temple 31



West and East Car-streets of Temple 30





# Spatial Evaluation of the temple locations

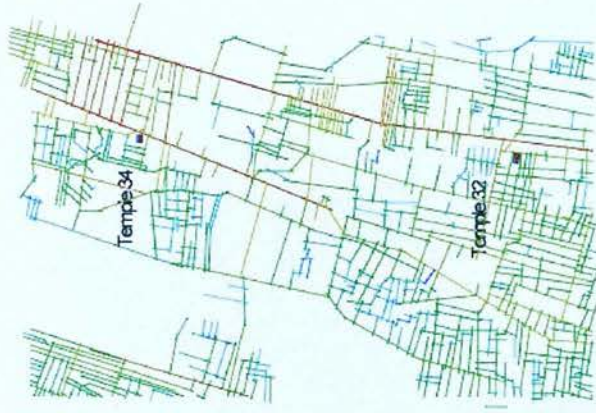
Location 15: Tondaiyarpet  
Appendix 2-3: Sheet 16

## A. Land Use Study

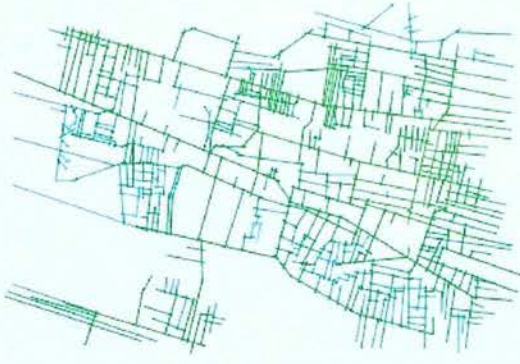


## B. Space Syntax Study

### Local Integration



### Global Integration



The scaling of this drawing cannot be assured!

## C. Local use and figure-ground Study



North Car-street of Temple 32

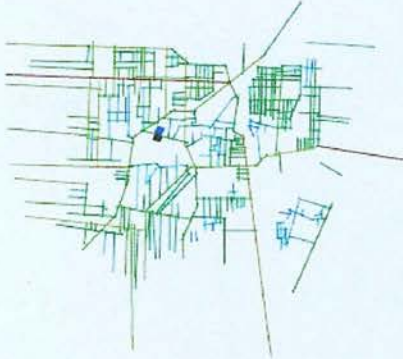
Main street of Temple 34

# Spatial Evaluation of the temple locations

## A. Land Use Study



## B. Space Syntax Study



## Global Integration



The scaling of this drawing cannot be assured

## C. Local use and figure-ground Study



Main road on the west of the Temple 33



Tank of the Temple 33





**Spatial Evaluation of the temple locations**

Location 17: Thiruvetriyur  
Appendix 2.3: Sheet 18

**A. Land Use Study**

Location: Abutting the northern boundary of the city  
Predominant land use: Mixed  
Commercial land use: along the main routes and the routes connecting the main roads and the case-study temples.

**B. Space Syntax Study**

Local Integration



Global Integration



The scaling of this drawing cannot be assured

**C. Local use and figure-ground Study**



Temple 35



Temple 36



Entrance street of Temple 35



Entrance street of Temple 36



## Appendix 2.4

### Statistical data of the local context evaluation

#### 2.4.1 Temple-tank

Scales of retail activity	Facing the main roads	Facing the major roads of the locality	Facing the local streets	Inside the temple complex/ surrounded by buildings	Total
Scale 1	1	4	0	8	13
Scale 2	0	1	6	8	15
Scale 3	0	0	2	6	8
Total	1	5	8	22	36

Significance: Tank outside facing the road corresponds to 'Scale 1 retail activity'.

#### 2.4.2 Position of the temple

Scales of retail activity	Squared by	'T' junction	On the sides	At the end	Total
Scale 1	0	6	7	0	13
Scale 2	1	2	11	1	15
Scale 3	0	2	5	1	8
Total	1	10	3	2	36

Significance: 'T' junctions correspond to 'Scale 1 retail activity' and 'on the sides' to 'Scale 2 retail activity'.

#### 2.4.3 Local landmarks

Scales of retail activity	Transport and buildings	Buildings	Hardly any	Total
Scale 1	12	1	0	13
Scale 2	2	13	0	15
Scale 3	0	4	4	8
Total	13	19	4	36

Significance: 'Transport and buildings' correspond to 'Scale 1 retail activity' and 'buildings' to 'Scale 2 retail activity'.

<b>2.4.4 Function of the road</b>					
Scales of retail activity	City main road	Connecting the main roads and the local streets	Connecting the local streets	Connecting the local street and the temple	Total
Scale 1	4	8	1	0	13
Scale 2	0	11	4	0	15
Scale 3	0	0	6	2	8
Total	4	18	11	2	36

Significance: ‘Connecting the main roads and the local streets’ correspond to the ‘Scales 1 and 2 of retail activity’.

<b>2.4.5 Local land use</b>					
Scales of retail activity	Residential	Mixed Residential	Commercial	Residential and Institutional/Industrial	Total
Scale 1	0	9	4	0	13
Scale 2	8	5	0	2	15
Scale 3	7	0	0	1	8
Total	15	14	4	3	36

Significance: ‘Commercial’ and ‘Mixed Residential’ correspond to ‘Scale 1 of the retail activity’ and ‘Residential and Institutional/Industrial’ corresponds to ‘Scale 3 of retail activity’.

## Appendix 3

### Social analysis – Questionnaire data

#### 3.1 Descriptive Analysis

##### Factual Data

3.1.1 Age groups of the respondents	
Age Group	Frequency and Percent
Less than 20	N=23, 22.5
20 - 39	N=41, 40.2
40- 59	N=27, 26.5
60 and above	N=11, 10.8
Total	N=102, 100.0

3.1.2 Gender of the respondents	
Gender	Frequency and Percent
Male	N=48, 47.1%
Female	N=54, 52.9%
Total	N=102, 100.0%

Table 3.1.3 Occupational status of the respondents	
Occupation	Frequency Percent
Workers	N=43, 42.2%
Student	N=18, 17.6%
Housewife	N=18, 17.6%
Retired	N=12, 11.8%
Vendors	N=9, 8.8%
Total	N=100, 98.0%



## Part A of the questionnaire

**Table 3.1.4 The main purpose of the respondents' visit on that particular day**

Main purpose	Frequency	Percent
To visit the temple	56	54.9
Shopping	28	27.5
Walking through	12	11.8
Others	6	5.8
Total	102	100.0

**Table 3.1.5 The travel mode used by the respondents**

Travel mode	Frequency	Percent
Bus	21	20.6
Car	16	15.7
Other public transport	30	29.4
Pedestrian	32	31.4
Bike	3	2.9
Total	102	100.0

**Table 3.1.6 Frequency of temple visits**

Frequency of visits	Number and % of respondents
Once a month	N=31, 30.4%
Twice a month	N=12, 11.8%
Once a week	N=25, 24.5%
More than once a week	N=7, 6.9%
Daily	N=17, 16.7%
Rarely	5, 4.9%

**Table 3.1.7 Reasons for visiting the temple**

Reasons	Frequency
Belief in the particular God	N=43, 42.2%
Proximity to house	N=29, 28.4%
Social	N=11, 10.8%
Traditional	N=10, 9.8%
Other	N=4, 3.9%
Total	97

Table 3.1.8 Frequency of shop visits	
Frequency of the visit	Number and % of respondents
Once a month	N=33, 32.4%
Twice a month	N=10, 9.8%
Once a week	N=20, 19.6%
More than twice a week	N=20, 19.6%
Daily	N=5, 4.9%
Rarely	N=8, 7.8%

Table 3.1.9 Reasons for doing shopping as mentioned by the respondents		
Economic reasons: n=40, 39.1%	Group 1: traditional commodities: n=17, 42.5% <sup>2</sup>	Silk, gold, silver and other products like traditional medicines
	Group2: Essential commodities: n=15, 37.5% <sup>2</sup>	Groceries
	Group 3: Choices and bargains: n=8, 20%	On street open pedestrian path shops and hawkers
Temple-related reasons n=38, 37.3% (process related)	To buy the temple offerings n=18, 47.4% <sup>2</sup>	Flowers, camphor, milk, oil etc
	To combine with visiting the temple n=16, 42.1% <sup>2</sup>	Temple as main motive for visit
	Religious beliefs n=4, 10.5% <sup>2</sup>	Buying after coming from the temple to take home or to distribute to friends
Locational reasons: n=17, 16.6%	Accessibility: n=9, 53% <sup>2</sup>	Next to my house
	Because of the location n=5, 29.4% <sup>2</sup>	Bus facilities
	Availability: n=3, 17.6% <sup>2</sup>	Of commodities

3.1.10 List of commodities		
Commodities bought by the respondents	Frequency	Percent
Essential	15	16.0
Religious	27	28.7
Costumes	2	2.1
Religious and essential	41	43.6
Costumes and textiles	9	9.6
Total	94	100

1. Percentage to the total respondents (N=102)

2. The group percentage

3.1.11 Shopping frequency and types of commodities bought						
	Essential	Religious	Costumes	Religious and essential	Costumes and textiles	Total
Once in month	1	14	0	16	2	33
Twice in month	2	3	0	3	2	10
Once in week	4	2	2	9	2	18
More than twice a week	7	3	0	9	0	19
Daily	1	0	0	4	0	5
Rarely	0	5	0	0	3	8
Never	0	0	0	0	0	1
Total	15	27	2	41	9	94

## Part B of the questionnaire – Attitudinal statements

### Activities and perceptions about the temple

Table 3.1.12 – “I visit the temple to be spiritual”		
Attitudes	Frequency	Percent
Agree	35	34.3
Undecided	58	56.9
Disagree	*4	3.9
Total	97	95.1
Missing System	5	4.9
Total	102	100.0

Table 3.1.13 – “I visit the temples to relax”		
Attitudes	Frequency	Percent
Strongly agree	64	62.7
Agree	29	28.4
Undecided	2	2.0
Disagree	1	1.0
Strongly disagree	2	2.0
Total	98	96.1
Missing System	4	3.9
Total	102	100.0

\* The respondents are non-Hindus



Table 3.1.14 –“I visit the temples to socialise”		
Attitudes	Frequency	Percent
Strongly agree	21	20.6
Agree	44	43.1
Undecided	10	9.8
Disagree	17	16.7
Strongly disagree	5	4.9
Total	97	95.1
Missing System	5	4.9
Total	102	100.0

Table 3.1.15 – “I mostly visit the temples with peaceful surroundings”			
Attitudes	Frequency	Percent	Valid Percent
Agree	16	15.7	16.3
Undecided	16	15.7	16.3
Disagree	33	32.4	33.7
Strongly disagree	33	32.4	33.7
Total	98	96.1	100.0

Table 3.1.16 – “I mostly visit the temples which are easy to get to”			
Attitudes	Frequency	Percent	Valid Percent
Strongly agree	24	23.5	24.7
Agree	51	50.0	52.6
Undecided	8	7.8	8.2
Disagree	12	11.8	12.4
Strongly disagree	2	2.0	2.1
Total	97	95.1	100.0

Table 3.1.17 – “I mostly visit the temples which are close to the house”			
Attitudes	Frequency	Percent	Valid Percent
Strongly agree	18	17.6	18.8
Agree	61	59.8	63.5
Undecided	12	11.8	12.5
Disagree	3	2.9	3.1
Strongly disagree	1	1.0	1.0
Total	96	94.1	100.0

### 3.1.18 – “I visit the temple along with my family”

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	44	43.1	46.3
Agree	39	38.2	41.1
Undecided	7	6.9	7.4
Disagree	4	3.9	34.2
Strongly disagree	0	0	0
Total	95	93.1	100.0

### 3.1.19 – “I visit the temple alone”

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	42	41.2	46.2
Agree	32	31.4	35.2
Undecided	3	2.9	3.3
Disagree	11	10.8	12.1
Strongly disagree	3	2.9	3.3
Total	91	89.2	100.0

### 3.1.20 – “I visit the temple along with offerings”

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	38	37.3	38.4
Agree	31	30.4	31.3
Undecided	26	25.5	26.3
Disagree	3	2.9	3.0
Strongly disagree	00	0	0
Total	99	97.1	100.0

### 3.1.21 – “I distribute inside the temple occasionally”

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	8	7.8	8.1
Agree	35	34.3	35.4
Undecided	48	47.1	48.5
Disagree	7	6.9	7.1
Strongly disagree	0	0	0
Total	99	97.1	100.0

3.1.22 – “Temples are more relevant to my lifestyle”			
Attitudes	Frequency	Percent	Valid Percent
Strongly agree	50	49.0	50.5
Agree	31	30.4	31.3
Undecided	11	10.8	11.1
Disagree	7	6.9	7.1
Total	99	97.1	100.0

3.1.23 – “Temples have potential to attract more activities around them”			
Attitudes	Frequency	Percent	Valid Percent
Strongly agree	38	37.3	39.2
Agree	51	50.0	52.6
Undecided	7	6.9	7.2
Disagree	1	1.0	1.0
Total	97	95.1	100.0

3.1.24 – “Temples are symbols of local culture”			
Attitudes	Frequency	Percent	Valid Percent
Strongly agree	80	78.4	81.6
Agree	18	17.6	18.4
Total	98	96.1	100.0

3.1.25 – “Temples are the places for celebrating auspicious days”			
Attitudes	Frequency	Percent	Valid Percent
Strongly agree	34	33.3	37.0
Agree	51	50.0	55.4
Undecided	3	2.9	3.3
Disagree	4	3.9	4.3
Total	92	90.1	100.0

3.1.26 – “Temples are places for everyday worship”			
Attitudes	Frequency	Percent	Valid Percent
Strongly agree	19	18.6	19.2
Agree	8	7.8	8.1
Undecided	6	5.9	6.1
Disagree	64	62.7	64.6
Strongly disagree	2	2.0	2.0
Total	99	97.1	100.0



## Part B of the questionnaire – Attitudinal Questions (Contd.)

### Activities and perceptions about the shops

3.1.27 – “I shop here because the location is safe”			
Attitudes	Frequency	Percent	Valid Percent
Strongly agree	60	58.8	59.4
Agree	20	19.6	19.8
Undecided	15	14.7	14.9
Disagree	6	5.9	5.9
Total	101	99.0	100.0

3.1.28 – “I shop here because it is easy to get to”			
Attitudes	Frequency	Percent	Valid Percent
Strongly agree	30	29.4	31.6
Agree	32	31.4	33.7
Disagree	30	29.4	31.6
Total	92	90.2	100.0

3.1.29 – “I use the visit to combine it with other activities”			
Attitudes	Frequency	Percent	Valid Percent
Strongly agree	33	32.4	36.3
Agree	38	37.3	41.8
Undecided	7	6.9	7.7
Disagree	13	12.7	14.2
Total	91	89.3	100.0

3.1.30 – Reason for combined activity			
Attitudes	Frequency	Percent	Valid Percent
No reason	11	10.8	14.5
Temple	56	54.9	73.7
Work	5	4.9	6.6
School	1	1.0	1.3
Socialising	2	2.0	2.6
Transit	1	1.0	1.3
Total	76	74.5	100.0

**Table 3.1.31 – “I shop here because I get most of the food and home commodities I need”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	28	27.5	29.5
Agree	43	42.2	45.3
Undecided	6	5.9	6.2
Disagree	18	17.6	19.0
Total	95	93.1	100.0

**Table 3.1.32 List of commodities**

Commodities	Frequency	Percent
Essential	15	14.7
Religious	27	26.5
Religious and essential	41	40.2
Durables	11	10.8
None	1	1.0
Total	95	93.1

**3.1.33 Shopping frequency and commodities**

Frequency	Essential	Religious	Religious and essential	Durables	Total
Once in a month	1	14	16	2	33
Twice in a month	2	3	3	2	10
Once in a week	4	2	9	3	18
More than twice a week	7	3	9	0	19
Daily	1	0	4	0	5
Rarely	0	5	0	3	8
	15	27	41	10	94

**Table 3.1.34 – “I associate shopping here with it being a pleasure”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	21	20.6	21.9
Agree	42	41.2	43.8
Undecided	6	5.9	6.3
Disagree	26	25.5	27.1
Strongly disagree	1	1.0	1.0
Total	96	94.1	100.0

**Table 3.1.35 – “I associate shopping here as an essential activity of life”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	63	61.8	64.3
Agree	28	27.5	28.6
Undecided	4	3.9	4.1
Disagree	3	2.9	3.1
Total	98	96.1	100.0

**Table 3.1.36 – “I associate shopping here as a leisure activity”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	16	15.7	16.7
Agree	37	36.3	38.5
Undecided	8	7.8	8.3
Disagree	28	27.5	29.2
Strongly disagree	7	6.9	7.3
Total	96	94.1	100.0

**Table 3.1.37 “I associate shopping here as part of religious activity”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	7	6.9	7.2
Agree	40	39.2	41.2
Undecided	17	16.7	17.5
Disagree	32	31.4	33.0
Strongly disagree	1	1.0	1.0
Total	97	95.1	100.0



## Part B of the questionnaire – Attitudinal statements (Contd.)

### Activities and perceptions about the location

**3.1.38 Way-finding reason**

Answers	Frequency	Percent	Valid Percent
Temple	58	56.9	57.4
Street layout	16	15.7	15.8
Transport	27	26.5	26.8
Total	101	99.0	100.0

**3.1.39 – “The location is a commercial node of the city”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	23	22.5	23.5
Agree	73	71.6	74.5
Undecided	1	1.0	1.0
Disagree	1	1.0	1.0
Total	98	96.1	100.0

**3.1.40 – “I think the traffic is just about right”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	7	6.9	7.2
Agree	28	27.5	28.9
Undecided	9	8.8	9.3
Disagree	40	39.2	41.2
Strongly disagree	13	12.7	13.4
Total	97	95.1	100.0

**Table 3.1.41 – “I think this area needs more maintenance”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	38	37.3	37.3
Agree	61	59.8	59.8
Undecided	3	2.9	2.9
Total	102	100.0	100.0

**Table 3.1.42 – “I enjoy the lively atmosphere here”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	27	26.5	27.0
Agree	50	49.0	50.0
Undecided	8	7.8	8.0
Disagree	12	11.8	12.0
Strongly disagree	3	2.9	3.0
Total	100	98.0	100.0

**Table 3.1.43 – Preferred land use**

Attitudes	Frequency	Percent	Valid Percent
No shops	15	14.7	14.7
Shops that support the temple uses	39	38.2	38.2
More shops than those that support the temple uses	48	47.0	34.3
Total	102	100.0	100.0

**Table 3.1.44 – “I enjoy using the pedestrian shops”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	28	27.5	29.2
Agree	26	25.5	27.1
Undecided	7	6.9	7.3
Disagree	24	23.5	25.0
Strongly disagree	11	10.8	11.5
Total	96	94.1	100.0

**Table 3.1.45 – “I like the mix of temple and commercial uses”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	4	3.9	3.9
Agree	57	55.9	55.9
Undecided	17	16.7	16.7
Disagree	20	19.6	19.6
Strongly disagree	4	3.9	3.9
Total	102	100.0	100.0

**Table 3.1.46 – “I like the mix of traditional and modern styles of architecture”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	5	4.9	5.2
Agree	30	29.4	31.3
Undecided	6	5.9	6.2
Disagree	45	44.1	46.9
Strongly disagree	10	9.8	10.4
Total	96	94.1	100.0

**Table 3.1.47 – “I associate the tank as an open space”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	9	8.8	8.9
Agree	26	25.5	25.7
Undecided	11	10.8	10.9
Disagree	46	45.1	45.5
Strongly disagree	9	8.8	8.9
Total	101	99.0	100.0

**Table 3.1.48 – “I associate the tank as part of the temple”**

Attitudes	Frequency	Percent	Valid Percent
Strongly agree	29	28.4	28.7
Agree	70	68.6	69.3
Undecided	2	2.0	2.0
Total	101	99.0	100.0

**Table 3.1.49 – Spatial elements preferred**

Attitudes	Frequency	Percent	Valid Percent
Street	14	13.7	13.9
Shop	19	18.6	18.8
Tank	3	2.9	3.0
Temple	60	58.8	59.4
Other - Residences	5	4.9	5.0
Total	101	99.0	100.0



### 3.1.50 Reasons mentioned for the spatial preferences

Answers	Reasons mentioned by the respondents	Frequency	Percent
Temple	Association with and belief in the God	20	22.0
	Temple is my reason for coming here	16	17.5
	Traditional architecture of the temple	12	13.1
	Unspoilt by men	5	5.5
	Peaceful	1	1.1
	Visually magnificent	1	1.1
Streets	Concentric layout	7	7.7
	Lively	9	9.9
Shops	Commodities	5	5.5
	Lively	8	8.8
Residences	My house – proximity to amenities yet quiet	4	4.4
Tank's periphery	Openness	2	2.2
	Concentric street layout	1	1.1
	Total	91	100%

3.2 Associative Analysis – significance calculated by the SPSS non-parametric tests.

Closed questions - Attitudinal statements

3.2.1 Temple

The following are the closed questions about the temples.  
The attitudinal rating varies from Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD).  
The symbol √ implies that the given sub-group has significantly agreed or disagreed with the statement.

Agree to disagree frequency		Sub group										Main purpose	New Freq
		SA	A	U	D	SD	Cones	Gender	Age group	Locals	Family	Occupation	
Attitudinal statements	I visit temples	35	58	2	-	-	Agree						
	To feel spiritual												
	To relax	64	29	2	1	2	Agree		√		√	√	
	To socialise	21	44	10	17	5	Agree			√			
	That have calm and peaceful surroundings	12	16	4	65	1	DA			√		√	√
	That are more easily accessible	19	56	4	17	1	Agree						
	That are close to my house	15	57	14	9	1	Agree		√		√	√	
I come to the temple	Along with my family	44	39	7	-	-	Agree	√	√		√	√	
	Alone	42	32	3	11	3	Agree						
	Along with offerings	38	35	22	3		Agree						√
When in the temple	I interact with my social circle	14	42	14	23	3	Agree						
	I do distribute occasionally/ frequently	8	35	48	7	-	Agree					√	

Agree to disagree frequency							Sub group							
Attitudinal statements		SA	A	U	D	SD	Concs	Gender	Age group	locals	family	Occupation	Main purpose	New Freq
I think temples are	Most relevant to my life style	50	31	11	7	-	S Agree					✓		
	Having more activities around them	38	57	7	1	-	Agree							
	Symbols of Tamil culture	80	18	-	-	-	S Agree							
	Good for children as a place to enjoy	80	18	-	-	-	S Agree					✓	✓	
	Places for social celebrations	34	5	3	4	-	Agree							
	Places for everyday worship	19	8	6	64	2	D Agree		✓	✓		✓	✓	



### 3.2.2 Shops

The following are the closed questions about the shops.  
The attitudinal rating varies from Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD).  
The symbol √ implies that the given sub-group has significantly agreed or disagreed with the statement.

Agree to disagree frequency Attitudinal statements		Sub group										New Freq		
		SA	A	U	D	SD	Concs	Gender	Age group	Locals	Family		Occu pation	Main purpose
I shop here because	I feel safe in this location	60	20	15	6	-	S Agree			✓				
	It is easy to get to	32	30	-	30	-	Agree			✓			✓	
	I combine doing other activities than just shopping eg. taking the children to school	33	38	7	13	-	Agree							✓
	I get most of the food and household goods I need	28	43	6	18	-	Agree							
I shop here	The commodities									✓			✓	✓
I associate shopping with	Pleasure of looking at the new items for sale	21	42	6	26	-	Agree		✓			✓	✓	
	Essential activities of everyday life	63	28	4	3	-	S Agree			✓				✓
	Leisure	16	37	8	27	7	Nil ?	✓	✓			✓		
	Part of religious activity	7	40	17	32	1	nil						✓	✓

### 3.2.3 Location

The following are the closed questions about the shops.

The attitudinal rating varies from Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD).

The symbol √ implies that the given sub-group has significantly agreed or disagreed with the statement.

Agree to disagree frequency										Sub group					Local s	Family	Occu pation	Main purpose	New Freq
Attitudinal statements					SA	A	U	D	SD	Concs	Gender	Age group							
I think the area is more congested					24	52	3	23	-	Agree							√		
I feel this area needs more maintenance					38	61	3	-	-	Agree					√				
I enjoy the lively atmosphere					27	50	8	12	3	Agree					√				
I think the traffic is just about right					7	28	9	40	13	D Agree		√							
I think the shops here are useful as a healthy atmosphere					4	67	7	18	4	Agree	√	√			√				
Elements																			
I enjoy using the on-street small shops (eg. café/food stands)					28	26	7	24	11	Agree									
I feel the pedestrian paths can be made wider					30	50	4	12	-	Agree						√			
I like the mix of temple and commercial activities					4	57	17	20	4	Agree	√								
I think there is privacy in these houses					14	41	10	22	8	Agree									
I like the mix of traditional and modern architecture					5	30	6	45	10	D Agree	√	√		√		√			
I associate the tank as an open space					9	29	11	46	9	D Agree									
I associate the tank as part of the temple					29	70	2	-	-	Agree									

Open ended questions

3.2.4 Temple

The following is the open-ended question about the temples.

The coding of each category is given in the legend below.

Agree to disagree frequency Statements	Sub group							Concs	Age group					Locals	Family	Occu pation	Main purpose	New freq
	1	2	3	4	5	6	20		gender									
Other activities I do inside the temple	7	24	15	6				Chat										

Legend:

- 1 Sitting & seeing
- 2 Chat
- 3 Walking around
- 4 Watching children playing
- 5 Sitting quiet



### 3.2.5 Shop

The following is the open ended question about the shops. The coding of each category is given in the legend below.

Agree to disagree frequency Statements	Sub group						Locals	Family	Occupation	Main purpose	New freq
	1	2	3	4	5	6					
1. Please specify what activity you would combine with shopping	56	5	1	2	1	NA				✓	✓
2. I shop here for these commodities	16	24	2	39	4	3				✓	✓

#### 1. Legend for the first statement of combination activity

- 1-Temple
- 2- Work
- 3- School
- 4-Socialising
- 5- Transit

#### 2. Legend for the list of shopping commodities

- 1- Essentials
- 2- Offerings
- 3- Costumes
- 4- Essentials + offerings
- 5- Offerings + costumes
- 6- Offerings + religious speciality

3.2.6 Location

The following is the open-ended question about the location. The coding of each category is given in the legend below.

Sub group										New freq
Frequency Statements	1	2	3	4	5	Cones	Gender	Age group	Locals	
1. It is easy to come here because ( <i>please specify</i> )	53	16	27	NA	NA	Temple as a landmark				
2. I would prefer the area to be ( <i>please tick one</i> )	15	39	48	-	-	More commercial use than that supports temple use			✓	✓
3. Which part of the space do you prefer the most o use ( <i>please tick one</i> )	11	15	2	68	5	Temple		✓	✓	✓
3a. Reasons									✓	✓

1. Legend for “It is easy to come here because (please specify)”

- 1 – Temple is a landmark
- 2 – Transportation
- 3 – Road layout

2. Legend for “I would prefer the area to be (please tick one)”

- 1 No commercial use
- 2 Commercial use that supports the temple use
- 3 More commercial use than that supports the temple use

3. Legend for “Which part of the space do you prefer to use the most (please tick one)”

- 1 Streets
- 2 Shops
- 3 Tank and its periphery
- 4 Temple
- 5 Others

### 3.3 Associative analysis results

#### 3.3.1 Subgroup: Gender

Table 3.3.1: SPSS Non-parametric test results of the 'gender' subgroup		
Statements	Male	Female
I come to the temple along with my family	-	All agreed they would come with their family
I think shops here are useful as a healthy atmosphere	N=38, 79.1% agreed/strongly agreed	N=33, 61.1% agreed
I like the mix of temple and commercial activities	N=34, 70.8% agreed/strongly agreed	-
I like the mix of traditional and modern styles of architecture	-	N=39, 72.2% disagreed
New frequency	N=20, 41.7%: new frequency is 0: combine	N=32, 59.3% new frequency=0: combine
Safety		Significantly agree

#### 3.3.2 Sub group: Age

Table 3.3.2 SPSS Non-parametric test results of the 'age' subgroup				
Statements	Age group 1: less than 20	Age group 2: 20 to 39	Age group 3: 40 to 59	60 and above
I visit temples close to my house	More the younger, visit the temples close to their house with their family	Distributed, they visit the temples close to their house with their family: they mostly agreed that they come to the temples to relax	100% to relax, close to the house - come in group and alone	100% relax and 100% close to the house, mostly come alone, everyday worship
The temple is a place for my everyday worship.	100% younger disagreed/disagreed strongly	Mostly (28/40) disagreed	13/27 disagreed	8/11 agreed/agreed strongly
I associate shopping with the pleasure of looking at new commodities.	Mostly agreed	-	Mostly agreed	Disagreed as leisure
I enjoy this lively atmosphere	They agree/agreed strongly	Mostly agreed	Mostly agreed	No distinct pattern
The traffic is just right	They agree traffic is just right.	Appreciate the shop: but disagreed the way it is articulated - ie, the mix of old and new styles	Appreciate shop are useful.	No distinct pattern
I like the mix of old and new styles of architecture.				
Which space do you prefer, to use the most.	They prefer a wide range of settings	27/40 preferred the temple	21/27 - distinctly temple	10/11 - distinctly temple



### 3.3.3 Sub group: Occupation

**Table 3.3.3: SPSS Non-parametric test results of the 'occupation' subgroup**

Statement	House-wife	Business	Worker	Retired	Student
I visit temples to relax	N=16, 88.9%	N=7, 77.8%		N=12, 100% agree	N=16, 89.9% A/SA
I visit temple along with my family	N=18, 100%				N=14, 77.9% A/SA
I visit temples that have calm and peaceful surroundings	N=11, 61.7% Disagree	N=12, 100% disagree			N=17, 100% D/SD
I visit temples that are Close to house	N=12, 66.7% A/SA	N=11, 91.7% A/SA			N=17, 97.4% A/SA
I visit temple alone	N=18, 100%			N=12, 100%	
I do distribution inside the temple	N=17, 94.4%				
Temples are relevant to my lifestyle	N=n=16, 89.9%		N=38, 88.4% agree/strongly agree	N=12, 100%	
Temples are the places of my everyday worship		Equally % agree/disagree	N=32, 74.4 disagree	Agree n=8, 66.7%	100% disagree
Temples are good for children as a place to enjoy	N=18, 100%			N=12, 100%	
I associate shopping as a pleasure of looking at the new commodities					N=17, 77.9% A/SA
I associate shopping with leisure					N=16, 88.9% A/SA
The area needs more maintenance		N=9, 100%		N=12, 100% A/SA	N=15, 83.3% unsure
Lively					N=18, 100% A/SA
The shops here are useful as a healthy atmosphere.		N=7, 66.7%	N=33, 76.8% A/SA N=30, 69.8% A/SA	N=9, 75% A/SA N=10, 83.3% A/SA	N=16, 89.9% A/SA
L and use preference	N=11, 61.1% Suggested 2	No one suggested 1 N=7, 66.7% preferred 3 and 4			No one suggested 1 N=14, 77.8% preferred 3 and 4
I like the mix of old and new styles of architecture	N=11, 61.1% D/SD				
Landscape preferred element	N=12, 66.7% Temple		N=35, 81.4% Temple	N=10, 83.3% Temple	Interesting to note the wide range in preference

### 3.3.4 Subgroup – Main-purpose

Table 3.3.4 SPSS Non-parametric test results of the 'main-purpose' subgroup

Statement	Housewife	Business	Worker	Retired	Student
I visit temples to relax	N=16, 88.9%	N=7, 77.8%		N=12, 100% agree	N=16, 89.9% A/SA
I visit temple along with my family	N=18, 100%				N=14, 77.9% A/SA
I visit temples that have calm and peaceful surroundings	N=11, 61.7% Disagreed	N=12, 100% disagree			N=17, 100% D/SD
I visit temples that are close to my house	N=12, 66.7% A/SA	N=11, 91.7% A/SA			N=17, 97.4% A/SA
I visit the temple alone	N=18, 100%			N=12, 100%	
I do distribution inside the temple	N=17, 94.4%				
Temples are relevant to my lifestyle	N=n=16, 89.9%		N=38, 88.4% agree/strongly agree	N=12, 100%	
Temples are the places of my everyday worship		Equally % agree/disagree	N=32, 74.4 disagree	Agree n=8, 66.7%	100% disagree
Temples are good for children as a place to enjoy	N=18, 100%			N=12, 100%	
I associate shopping as a pleasure of looking at new commodities					N=17, 77.9% A/SA
I associate shopping with leisure					N=16, 88.9% A/SA
The area needs more maintenance		N=9, 100%		N=12, 100% A/SA	N=15, 83.3% unsure
Lively					N=18, 100% A/SA
The shops here are useful as a healthy atmosphere.		N=7, 66.7%	N=33, 76.8% A/SA N=30, 69.8% A/SA	N=9, 75% A/SA N=10, 83.3% A/SA	N=16, 89.9% A/SA
Land use preference	N=11, 61.1% Suggested 2	No one suggested 1 N=7, 66.7% preferred 3 and 4			No one suggested 1 N=14, 77.8% preferred 3 and 4
I like the mix of old and new styles of architecture	N=11, 61.1% D/SD				
Landscape preferred element	N=12, 66.7% Temple		N=35, 81.4% Temple	N=10, 83.3% Temple	Interesting to note the wide range in preference
Notes: Percentages mention their appropriate sub-group percentage.					

3.3.5 Subgroup: Three-locations

Table 3.3.5 SPSS Non-parametric test results of the 'three-locations' subgroup			
	Thiruvanniyur (N=30, 29.4%)	Mylapore (N=38, 37.3%)	Thiruvetriyur (N=34, 33.3%)
Local and non-locals distribution	Locals = 20 Non-locals = 9	Locals = 20 Non-locals = 18	Locals = 15 Non-locals = 19
Commodities	Mostly essentials and offerings.	The leisure commodities are significantly bought from this location.	Mostly essentials and offerings.

3.3.6 Subgroup locals and non-locals

Table 3.3.6a Frequency of visiting the temple for locals and non-locals						
	Once a month	Twice a month	Once a week	More than once a week	Daily	Rarely
Non-locals	19	8	7	2	2	5
Locals	12	4	18	5	14	1
Total	31	12	25	7	16	6
						Total
						45
						55
						100

Significance: Non-locals visit the location less frequently than the locals.

Table 3.3.6b Frequency of shopping for locals and non-locals						
	Once a month	Twice a month	Once a week	More than twice a week	Daily	Rarely
Non-locals	20	7	7	1	1	6
Locals	13	3	13	18	4	2
Total	33	10	20	19	5	8
						Total
						44
						54
						98

Significance: Non-locals visit the location less frequently than the locals.



Table 3.3.6c Frequency of both the activities				
	Temple frequency < shop frequency	Temple frequency = shop frequency	Temple frequency > shop frequency	Total
Non-locals	6	29	9	44
Locals	14	23	17	54
Total	20	52	26	98

Significance: There is a habitual regularity in combining the activities of visiting a temple and shopping.

Table 3.3.6d Travel mode					
	Bus	Car	Other public transport	Pedestrian	Bike
Non-locals	17	12	14	2	1
Locals	3	4	16	30	2
Total	20	16	30	32	3
					101

Significance: The locals mostly visit on foot; whilst the non-locals use public transport.

Table 3.3.6e Main purpose						
Temple	Shop	Socialise	In transit	Reside	Work	Others
30	11	0	1	0	0	4
26	17	3	1	6	1	1
56	28	3	2	6	1	5
						101

Significance: The relative proportion of temple visitors is greater for the non-locals.

Table 3.3.6 SPSS Non-parametric test results of the 'locals/non-locals' subgroup		
Statements	Locals	Non-locals
I associate this temple as a place of everyday worship.	N=21, 38.2% agreed. (This is the majority (80.8%) of the respondents who agreed with this statement.)	N=35, 76% disagreed.
Commodities	N=14, 25.5% bought essential commodities N=6, 10.9% N=25, 45.54% bought religious commodities and essential commodities	N=2, % bought essential commodities N=18, 40%bought religious commodities only N=14, 31.1% bought religious and essential (mostly used the restaurants) commodities
Spatial element of preference	Preferences vary. [Street (n=9, 16.7%), Shops (n=13, 24%), Tank periphery (n=2, 3.7%), Temple (n=25, 46.2%) and Residences (n=5, 9.3%).]	The predominant preference (n=34, 74%) was the temple.

### 3.3.7 Frequencies correlation

Table 3.3.7a Temple and shop frequency comparison						
Temple frequency	Shop frequency					Total
	Once a month	Twice a month	Once a week	More than twice a week	Daily	
Once a month	24	3	1	2	1	31
Twice a month	4	5	1	1	0	12
Once a week	2	2	12	6	0	25
More than twice a week	2	0	1	3	0	7
Daily	0	0	4	7	4	16
Rarely	0	0	0	1	0	5
Total	33	10	20	20	5	98

Table 3.3.7b Frequencies correlation		
	Frequency	Percent
Group 1	52	51.0
Group 2	27	26.5
Group 3	20	19.6
Total	99	97.1

Significance: 51% had the same frequencies for both activities

Table 3.3.7c Frequencies correlation and the locals/non-locals comparison			
	Non-locals	Locals	Total
Group 1	29	23	52
Group 2	9	17	26
Group 3	6	14	20
Total	44	54	98

Significance: Most of the non-locals are in Group 1

Table 3.3.7 SPSS Non-parametric test results of the 'Frequencies correlation' subgroup			
Attitudinal statement	Group 1 (N=52, 51%) Both frequencies are the same.	Group 2 (N=27, 26.5%) Frequency of visiting the temple is more than that of shopping.	Group 3 (N=20, 19.6%) Frequency of shopping is more than that of visiting the temple.
I associate shopping as a part of religious activity	Mostly agreed (n=32, 61.5%)	No significance	Disagreed mostly (n=13, 65%)
Commodities bought	Religious commodities (n=20, 38.5%) and religious and essentials (n=24, 46.2%)	Religious and essential (n=12, 44.4%).	Hardly religious commodities (n=1, 0.5%) 50% of the leisure commodities buyers were from this group (n=6, 12).
Way-finding reason:	Temple as the landmark (n=30, 57.7%) Transportation: n=15, 28.8% Street layout: n=6, 11.6 %	Temple as the landmark: n=19, 70.4% Transportation: n=3, 11.1% Street layout: n=5, 18.5%	Temple as the landmark: n=7, 35% Transportation: n=9, 45% Street layout: n=4, 20%



### Appendix 3-4 Questionnaire

**Research aim:** To find the patterns of commercial activities associated with the temple locations.

Location	
Date	
ID	

**Questionnaire aim:** To get insights into the relationship between the temple and the commercial activities in the given location. All the information you provide will be highly valuable for the research.

#### Part A: About your visit to this place

**1. What is the main purpose of you visiting here today?**

To visit the temple	To shop	To socialise	Transitory	I reside here
I work here	I am a tourist	Other: (please specify)		

**2. Which transportation service you used to reach here?**

Bus	Train	Car	Other public transport:	Walking	other
-----	-------	-----	-------------------------	---------	-------

**3. Do you ever visit the temple? Yes/No: If yes,**

Reasons (please specify) \_\_\_\_\_  
Frequency (please specify) \_\_\_\_\_

**4. Do you ever shop in this location? Yes/No If yes,**

Reasons (please specify) \_\_\_\_\_  
Frequency (please specify) \_\_\_\_\_

**Part B: The next part of the questionnaire contains statements about the temples, shops and the location. Please mention your attitudes in the column provided next to the statements. (Please refer to the scale mentioned below to help you answer)**

Scale for rating your opinions

Strongly Agree	Agree	Undecided	Disagree	Strongly disagree
1	2	3	4	5

**5. About the temple**

<b>I visit temples</b>	For religious reasons		<b>I mostly visit the temples</b>	That have calm and peaceful surroundings	
	For relaxing			Which are more easy to get to	
	For socialising			Which are close to my house	
<b>I visit temples</b>	To _____ (please specify):				

## 5. About the temple – contd.

<b>I visit the temple</b>	Along with my family		<b>I think temples are</b>	Symbols of local culture	
	Alone				
	Along with offerings				
<b>I think temples are</b>	More relevant to my life style		<b>I think temples</b>	Have potential to attract more activities around them	
	Celebrative places			Everyday places	

## 6. About the shops

<b>I shop here because</b>	The location is safe		<b>I shop here because</b>	It is easy to get to	
I combine shopping with other activities			If so, please specify what activity you would combine with shopping _____		
<b>I shop here because</b>	I get most of the food and household goods I need		<b>I shop here these commodities</b>	_____	
<b>I think doing shopping here is a</b>			Leisure activity		
			Essential activity of life		
			Part of religious activity		

## 7. About the location

<b>I think</b> It is easy to come here because of the -----				
I think the traffic is just about right		I enjoy the co-existence of temple and shopping activities		
I enjoy using the pedestrian shops (eg. café/food stands)		I like the mix of traditional and modern architecture		
I associate the tank as part of the temple		I associate the tank as an open space		
<b>Which part of the space do you prefer to use the most</b> (please tick one)				
Streets	Shops	Tank's periphery	Temple	Others (please specify):
Reasons:				

### Part 3: Questions about you

**Any information you supply will be very helpful for this research.**

### 8. Age group

Less than 20	20-39	40-59	60 and above
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## 9. Gender

Male	Female
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### 10. Current occupation

Worker - Yes/No	Business - Yes/No	Housewife - Yes/No
Retired - Yes/No	Student - Yes/No	Other (please specify): _____

## 11. Religion

Muslim	Christian	Hindu	Other	Non-religious
--------	-----------	-------	-------	---------------

**12. Please write any other comments that were not included in the questionnaire and which you believe could help the research**

\_\_\_\_\_

**THANK YOU**